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ABSTRACT

This joint final report of nine Research Utilization Specialists (RUS) Demonstration projects conducted in state vocational rehabilitation agencies covers all aspects of the projects including resources used, roles and functions, dissemination and utilization strategies, and project outcomes. It is primarily a casebook, presenting specific instances in the RUSs' own words, and is intended for use by social service agency administrators contemplating the introduction of an RUS program and by new RUSs for guidance in their activities. (Author)



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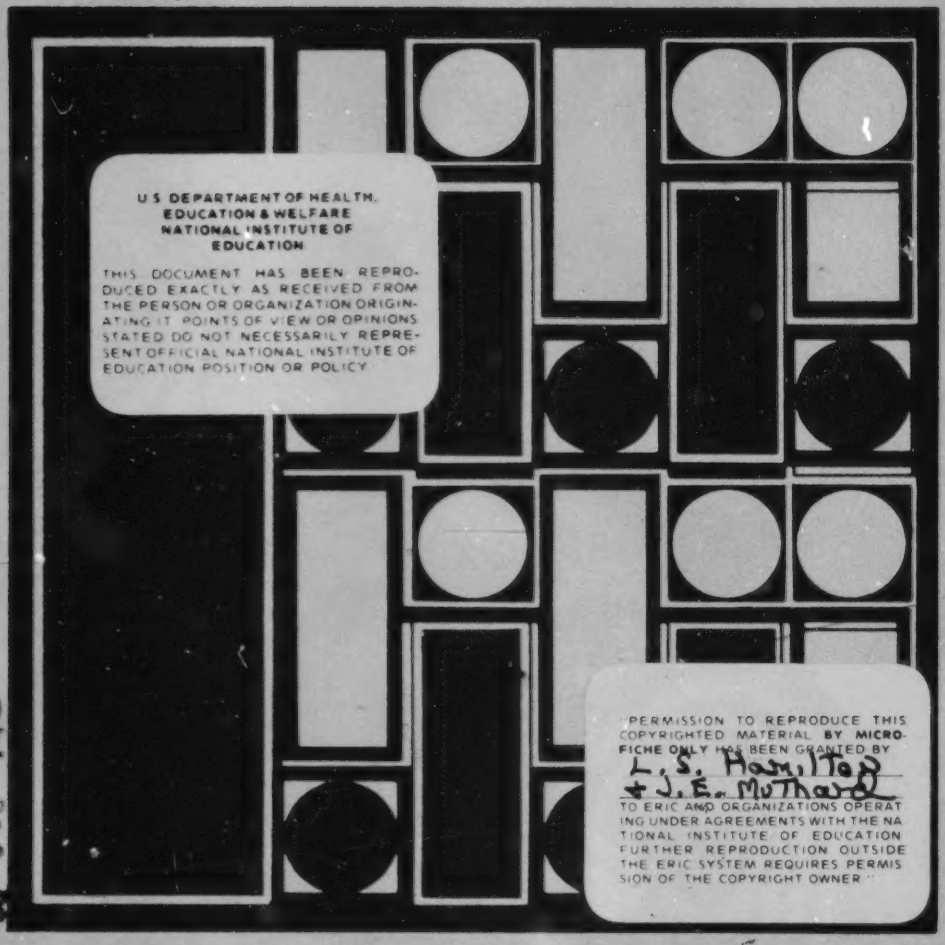
# RESEARCH UTILIZATION SPECIALISTS IN VOCATIONAL REHABILITATION



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# HIGHLIGHTS

** A Research Utilization Specialist (RUS) Program can operate successfully in a state Vocational Rehabilitation (VR) agency, but only if several necessary conditions are met.

** Necessary conditions include the active support of top level management and placement of the RUS in a state level supervisory position with some line authority.

** A systematic plan for information storage, retrieval, and dissemination is essential to an effective RU program. Agencies should provide sufficient funding and staffing to ensure an adequate information base and staffing for library functions.

** The RU program information base should not be limited to research information or the field of vocational rehabilitation. Knowledge pertinent to the practice of vocational rehabilitation can be found in psychology, sociology, education, manpower training, and related social science fields.

** Research utilization activities should be targeted to expressed needs of agency personnel. An RUS must have access to agency staff at all levels in order to determine needs upon which to design activities.

** An RUS must design and follow-through a systematic plan to obtain information and consultation from the social science research community. The successful RUS does not wait to be contacted by the research community, but initiates collaboration.

** The budget for an RUS program can be planned on a sliding scale, since costs increase as the program develops. An RUS can begin with a small budget, adding consultants, manpower, and special project funds as the program grows. However, even initially, the RUS budget must be flexible, allowing for adequate risk money and permitting immediate funding of innovative ideas.

# RESEARCH UTILIZATION SPECIALISTS IN VOCATIONAL REHABILITATION

## FIVE YEARS OF EXPERIENCE

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# ABSTRACT

This joint final report of nine Research Utilization Specialist (RUS) Demonstration projects conducted in state vocational rehabilitation agencies covers all aspects of the projects including resources used, roles and functions, dissemination and utilization strategies, and project outcomes. It is primarily a casebook, presenting specific instances in the RUSs' own words, and is intended for use by social service agency administrators contemplating the introduction of an RUS program and by new RUSs for guidance in their activities.

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# PREFACE

The preparation of a joint final report for the nine individual Research Utilization Specialist (RUS) Demonstration projects was first proposed by James Garrett. The idea was discussed, and approved, at a 1973 conference between the RUSs, project evaluators, federal monitoring staff, and research utilization consultants. It was agreed that a joint final report was an excellent medium for presenting overall experiences, outcomes, effects, and generalizations without requiring the interested reader to wade through nine separate documents which would, of necessity, contain much duplicate information. To achieve this, each RUS prepared an individual final report based on a standardized outline; the individual reports then became the basis of this single, integrated report. The University of Florida Rehabilitation Research Institute (UF-RRI) Director prepared the outline for the final reports, in consultation with the RUSs, SRS monitors, and project evaluators.

As individual final reports were submitted, UF-RRI staff reviewed their content against the outline and posed additional questions as needed to secure complete information. In addition to the joint individual reports, other published information on the RUS program including available SRS documents, and all documents published by the project evaluators, were reviewed and information used when pertinent.

This joint final report is intended to be a companion volume to the two major documents prepared by Edward Glaser & Associates (EGA), the project evaluators, *Evaluation of the National Research Utilization Specialist Demonstration Program, 1969-1974: Project Final Report* and *RUS Guidelines: A Source Book for Implementing a Research Utilization Specialist (RUS) Function in Vocational Rehabilitation Settings.* After the manner of a casebook, we have sought to report feelings and experiences as much as possible in the RUSs' own words. To this end,

they are quoted extensively; unless otherwise noted, all quotes from an RUS are taken from his individual final report. It is our hope that this compendium will be useful to social service agency management personnel, and new RUSs, in getting a feeling for the intricacies behind the practice of a research utilization specialist in a social service agency setting.

We sincerely appreciate the careful review of the initial draft provided by Bertrum Griffis, Margaret Clark, and George Engstrom of SRS; Thomas Backer and Edward Glaser of EGA; and the RUSs. Marilyn Parker worked many extra hours to type the draft through several revisions. Elizabeth Weldon and Betsy Garrett assisted with the typing. We also thank Jeffrey Thofner for his careful proofreading and Anne Adams for her perseverance in cutting and pasting excerpts from the final reports on cards for ease of arrangement. Much of the credit for the clarity of this report goes to our editor, Jacqueline Ryan.

John E. Muthard
Laurie S. Hamilton

April, 1975

*By the terms of the UF-RRI's agreement with SRS, this report serves as the comprehensive final report for all nine RUS programs and is therefore quite long. However, most sections of the report are self-contained and can be read with minimal reference to other sections. The reader is urged to use the detailed Contents pages to locate sections of specific interest.*

Copies of this edition can be secured by sending postage costs (50¢) to RRI, Box J-155, JHMHC, University of Florida, Gainesville, FL 32610.

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# INTRODUCTION

This compendium synthesizes the final reports of nine special projects conducted by the Social and Rehabilitation Service of the Department of Health, Education and Welfare. These nine projects placed a Research Utilization Specialist (RUS)—an individual charged with facilitating the improvement of service programs through the use of promising research findings—in selected State Vocational Rehabilitation (VR) agencies throughout the United States.

The decision to implement a Research Utilization Specialist within a social service agency was spurred by the substantial commitment of rehabilitation funds to research, demonstration, and training which has occurred since 1954. The federal agency's concern for achieving its mission, and the growing insistence of Congress for identifiable benefits from a substantial dollar investment in rehabilitation research, underscored the need to introduce novel approaches for encouraging the transfer of worthwhile R & D results into practice.

## VR RESEARCH AND ITS APPLICATION

Obermann's (1965) history of vocational rehabilitation in the United States shows little training or research activity in support of the basic VR service programs until 1954. VR programs did apply some of the lessons of research in vocational guidance and psychology, but little or no investment was made in research-oriented studies of problems unique to VR. Similarly, the VR agency practitioners and administrators came from other disciplines such as education, and personnel and guidance (Sussman and Haug, 1967).

With the passage of the Rehabilitation Act of 1954, PL 565, the state-federal vocational rehabilitation program committed itself to a two-pronged approach aimed at strengthening the basic service program by undergirding VR practice with systematically acquired knowledge.

This knowledge base was to be built by supporting research and demonstration programs (R & D) and university graduate training of rehabilitation counselors. The vocational rehabilitation R & D program thus developed grew from an initial budget of about $200,000 per year to one with resources of about $35 million annually at its peak. The growth of the R & D program brought with it several major problems, one of which was the volume of reports which began to flow into the Vocational Rehabilitation Administration's (VRA) Central Office. In response, the monitoring of research reports (essential to clear presentation of methodology and significant findings) was increased, but because of excessive demands on the time of central office and project staff, monitoring was discontinued in 1966 (Usdane, 1967a).

Viable solutions to the utilization problem were explored when the Joint Liaison Committee of the Council of State Administrators of Vocational Rehabilitation and Rehabilitation Counselor Educators met in Miami in December 1966 to consider "the state of the art . . . in the communication, dissemination and utilization of rehabilitation research information." William Usdane (1967a), then Chief of VRA's Research and Demonstrations Division, outlined 20 dissemination and utilization activities practiced at that time by central and regional office staff. These activities included stocking and distributing final research reports, publishing an annotated listing of funded projects and a bibliography of project reports, funding selected demonstration projects, and sponsoring projects specifically related to research utilization. Usdane listed 14 additional activities, either planned or underway, which were designed to strengthen the utilization of VRA-sponsored research.

Everett Rogers (1967), a communications specialist with substantial experience in the diffusion and utilization of innovations, described to the Joint Committee six aspects of the VR system which hampered utilization efforts:

1. The social system into which the innovation is being introduced is composed of professionals.

Rogers noted that previous studies had indicated that the professionalism of the audience is likely to influence the way innovations spread.

2. The sources of innovation are often far removed from the receivers or potential adopters.

Here Rogers noted not only the geographic and social distance between

rehabilitation knowledge producers and service providers, but also the practical problem of linking bits of knowledge relevant to field needs with rehabilitation administrators and counselors. Much of this information, even that designated and produced for the field of rehabilitation, is usually not readily available to counselors and administrators.

5. The hierarchical structures existing in the VR field often act as barriers or resistant forces to the diffusion of innovations.

The impact of organizational structure on the flow of information between knowledge producers and service providers and between service providers in different geographic areas was noted as well as the influence of the filtering process as information flows through several levels.

4. The type of innovation decision is often 'forced' rather than 'optional,' and is likely to be made collectively rather than individually.

The decision for change is usually mandated by top level management, rather than through a collaborative effort including field practitioners. The practitioners' attitudes, opinions, and felt needs have no bearing on the decision. Rogers noted that the collective aspect of VR decision-making has a long term positive effect. Although group decision-making is time consuming, "a collective decision once reached . . . is more likely to result in lasting change."

5. VR innovations seldom have high relative advantage and their consequences are often difficult to measure and evaluate.

The economic benefits of VR (as in many social service innovations) are not nearly as pronounced as "the economic windfalls of hybrid corn . . . or the 'curing powers' of penicillin." Further, the effects are not easily seen, clouding the fine line between "useful and non-useful" changes.

6. The 'closure' orientation of VR personnel serves to divert attention from consideration of innovative ideas.

The VR agency focus on numbers of rehabilitated cases usually results in the counselors' choosing to devote their time to the short-range goal of closure, with little time remaining to consider the quality of the rehabilitations achieved. Rogers noted that this orientation fosters the attitude of having "no time to fool around with research results."

In concluding his report to the Joint Committee, Rogers recommended the establishment of an information retrieval system, the development

of methods to encourage VR personnel to become better consumers of research results, the stimulation of programs to bring VR researchers and administrators into the world of the counselor periodically, and the development of a plan for a nationwide experimental program using change agents within the VR system.

At the time of the Joint Committee meeting (December 1966), a VRA Task Force on Research Utilization had also begun to collect information and consult experts in an attempt to formulate workable recommendations to guide the developing vocational rehabilitation research utilization program. Roger's insights and recommendations were a major influence on the Task Force.

In July 1967, before the work of the Task Force was completed, several organizational changes occurred. The VRA merged with the Welfare Administration and several other independent social agencies to form the Social and Rehabilitation Service (SRS); VRA formally became the Rehabilitation Services Administration (RSA). The research and demonstration programs of the separate agencies were combined within an SRS Division of Research and Demonstrations; within that Division a Research Utilization Branch (RUB) was created to organize research utilization activities. The stated goals of the Branch were

> to identify effective research results, bring them to the attention of the practitioners and administrators, and promote in every possible way their actual use to improve service programs for the handicapped, the social and culturally disadvantaged, the aged, and similar groups served by the Social and Rehabilitation Service.

In December 1967 the Task Force issued its final report. The following month the SRS Administrator authorized the RUB to join with the Task Force in implementing the final report recommendations.

## DISSEMINATION AND UTILIZATION—VRA AND SRS

The scope of the RU program developed within VRA and subsequently SRS is thoroughly described in papers by Usdane (1967a & b), Engstrom (1969), and more recently by Usdane (1971) and Muthard & Crocker (1974).

The development of the RU program drew not only from RU Task Force recommendations, but also from a Human Interaction Research Institute project (Glaser et al., 1967) which looked at "the factors which impede and those which facilitate the spread of innovation in the vocational rehabilitation field." The investigators "identified the com-

munication, organizational, and attitudinal barriers which keep many rehabilitation agencies from developing their own innovations or from adopting those of others." Their experience suggested that the adoption of promising innovations could be encouraged by using non-technical booklets, utilization conferences, and psychological consultation.

One of the most intense efforts of the SRS research utilization program lay in the development of basic tools for retrieving and disseminating the knowledge being generated by the SRS R & D program. In addition to such bibliographic tools as *Research 1971* (Jackson, 1971) and the set of indexes prepared by the RRRI at the University of Florida (Bailey & Muthard, 1968; Dumas & Muthard, 1970; Crocker, et al., 1973; Muthard & Crocker, 1971; Muthard, Rogers, & Crocker, 1971), the Research Utilization Branch planned and contracted for development of a *Rehabilitation Research Information System* (SRS/RIS). To complement the final and special reports of research and demonstration projects, the SRS/RIS now includes a thesaurus of locator terms (Schultz, 1972), a two-volume index (Schultz, 1974), and a multi-volume set of abstracts.

From its inception, the Branch also undertook a wide range of steps to improve the dissemination of meritorious projects. One of the most significant was the stipulation that all final reports include a brief abstract describing the character of the project and a summary description of the most significant findings and their implications for the field of rehabilitation. Greater emphasis was placed on developing readable and attractive reports, with the end result of substantially improving the quality of the research documents distributed to the field.

To enlarge the audience for 45 outstanding projects thought to have direct implications for practice, Branch staff prepared readable, practitioner-oriented two and four-page BRIEFs which were distributed widely (as many as 30,000 copies each issue) to rehabilitation workers in both public and private programs. A readership study showed that many of the BRIEFs were well received (Muthard, Crocker, & Wells, 1973).

In another major effort to link the researcher to the practitioner, selected SRS grantees were encouraged to conduct research utilization conferences. The conferences were an avenue for early transmission of the findings and implications of significant projects. They also enabled practitioners and other researchers to influence or contribute to the conclusions and implications contained in project final reports.

The personal contact approach was also incorporated into project

RULE, conducted by the University of Missouri RRRI, which enabled practitioners to observe rehabilitation innovations in action by visiting the sites of successfully implemented new practices. On another tack, the Wisconsin RRRI undertook a project to provide a cadre of selected rehabilitation consultants to respond to the specific needs of state VR agencies.

Several other broad-gauge R & D activities were directed toward testing new avenues and generating new knowledge bearing on the RU problems in rehabilitation. Two Research Utilization Laboratories (RULs) were established at the Jewish Vocational Service, Chicago, and the ICD Rehabilitation and Research Center in New York City. The RULs aimed to develop procedures for transforming useful R & D findings into operationally useful form. They also planned and underwrote the training of practitioners needed to implement new approaches.

Research projects designed to broaden the understanding of specific elements of the RU process were conducted at the University of Florida RRRI and at the Center for Research on the Utilization of Scientific Knowledge at the University of Michigan. The UF-RRRI studies assessed the effectiveness of dissemination within the rehabilitation programs (Crocker & Muthard, 1972; Dumas & Muthard, 1970a; Muthard, Crocker & Wells, 1973) and the use of information resources by VR state level supervisors (Muthard & Crocker, 1974); the studies conducted by Havelock (1972, 1974) examined the entire SRS utilization network to provide a suggested model for enhancing the effectiveness of the RU system.

## RESEARCH UTILIZATION CONCEPTS AND MODELS

The past decade has witnessed a phenomenal growth in both the interest and resources invested in this endeavor. Extended reviews of the conceptual models and a review of completed studies are available in Havelock (1971) and Rogers and Shoemaker (1971). A two-volume *Distillation of Principles on Research Utilization*, backed by an annotated bibliography, was prepared by Glaser, et al., for the National Institutes for Mental Health in 1971 (NIMH, 1972a & b). These volumes provide a summary report and abstracts of the work most germane to RU in the social services, with particular emphasis on mental health studies.

Although these compendiums note an impressive growth in efforts to improve the dissemination and utilization of knowledge, the resources allocated to RU represent an insignificant portion of the total resources

devoted to R & D. In an extensive review of the impact of federally-sponsored technology on the economy, the Committee on Technology Transfer and Utilization of the National Academy of Engineering (1974) concluded that, with few exceptions, widespread spin-offs have not resulted:

> $1 billion of the $17 billion of federally-funded R & D in 1973 went into the collection, processing, and dissemination of information about the resulting technology and . . . only $43 million of the total R & D budget was spent to stimulate substantial and profitable secondary uses of technology.

To correct this imbalance the Committee recommended to the National Science Foundation that $1 billion be spent each year to promote utilization.

To provide further background and perspective to the problems faced in bridging the gap between research and practice in rehabilitation, it may be worthwhile to look briefly at the experience of educational research. Despite the long history of university-based educational research with relatively large investments in manpower, and notwithstanding educational leadership who had the benefit of graduate and research training, the application of educational research to practice has lagged. The problem stems from a misconceived relationship. Educational researchers

> assume that the educational process corresponds to the rational, problem-solving methods of scientific research. However, the problem-solving process of educators is not analogous to the scientific method, for educational problem-solving requires immediate decisions [Monohan, 1969].

These decisions often must be made on the basis of inadequate information if for no other reason than lack of time to gather more complete information. Carter (1966) suggests that another source of discord can be traced to the lower prestige of applied science among researchers:

> Traditionally, the researcher has taken the position that if he publishes his results in the formal scientific literature he has discharged his responsibility. From the evidence cited it would appear that the formal publication of new findings does not by any means assure that the results will be expeditiously translated into a useful development.

RU can be defined in terms of process and structure:

> The process involves the flow of information from basic research, to development of applications, to action, to dissemination . . ., to use by the consumer [Havelock & Benne, 1969].

Jung and Lippitt (1968) indicate that structure can supply the necessary links in the process:

> Structure of utilization refers to the organization of the roles of researcher, developer, practitioner, consumer, and linker. . . . Between any of these elements there might be a need for special linkage activities.

In a recent report on RU activities in four federal agencies, Havelock (1974) conceptualized a model of the RU system as including the elements in Figure 1. He suggests that this

**Figure 1**

**An Elaborated Framework for Analysis**

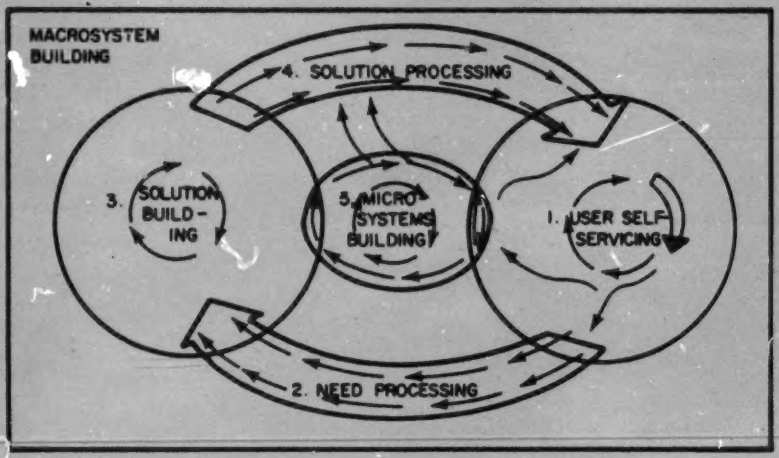



figure can be read clockwise, starting with the user (1) as the one who has the need and feels the 'pain' and proceeding through the articulation and communication of that need (2) to resource systems. These resource systems in turn (3) generate solutions and (4) transmit these solutions back to users.

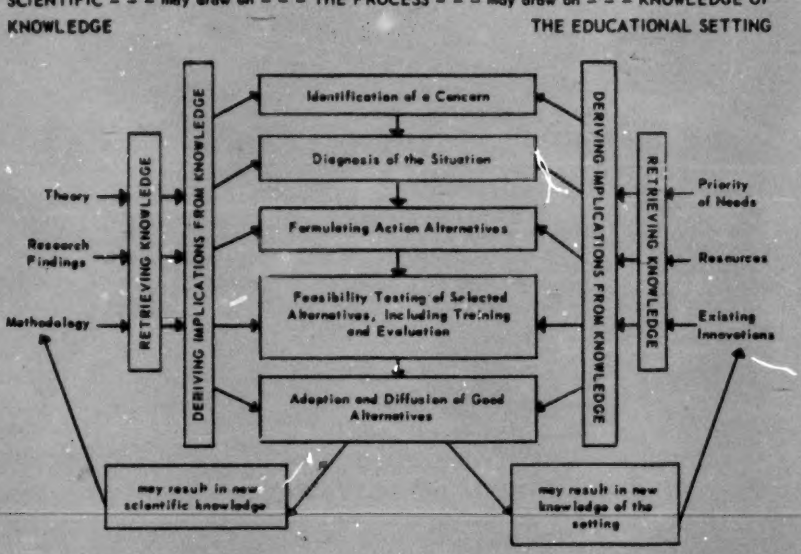
Within the larger macro-system (6) he found specific researchers brought together to work on specific user problems at close range with genuine and immediate dialogue with the users themselves, examples of which he labels micro-systems (5).

Jung and Lippitt (1966) have suggested a model for education (Figure 2) which shows the interactive character of the process and its participants. The main focus is on the problem solving phases of planned change:

Each of the phases may or may not draw on the practitioner's knowledge of educational settings and the social scientist's scientific knowledge. To the extent that they draw on the latter in creating products for the former, the process becomes one of utilizing scientific knowledge. It should be noted that educational innovations are developed which do not draw upon scientific knowledge; also there is much relevant scientific knowledge which has not yet been utilized by [educational] practitioners.

Figure 2

Knowledge Utilization Model for Educational Change




The above model for change suggests not only the unique contribution of scientific knowledge and knowledge of the setting, but also that all phases of the process can benefit from each type of knowledge. Furthermore, appropriate emphasis is placed on the development of implications from knowledge of either type. Thus, the RUS as linker is best seen as a catalyst to this process, with perhaps a greater awareness of the rehabilitation setting than of scientific knowledge. The RUS has a commitment to facilitate the transformation of knowledge from both sectors into steps leading to the trial and adoption of viable alternatives for improving rehabilitation services.

## Knowledge Linking Roles

The types of knowledge linking roles which have evolved from the efforts of individuals and institutions to promote the trial and adoption of innovations are outlined by Havelock (1971). A listing of these types, with an abbreviated description of their function, provides perspective for the variations in roles assumed by the RUSs in the vocational rehabilitation agencies:

| | |
|---|---|
| Conveyer: | transfer knowledge from producers to users. |
| Consultant: | assist users in identifying problems and resources, provide linkage to appropriate resources, assist in adaptation to use. |
| Trainer: | transfer by instilling in the user an understanding of an entire area of knowledge or practice. |
| Leader: | effect linkage through power or influence in one's own group, transfer by example or direction. |
| Innovator: | transfer by initiating diffusion in the user system. |
| Defender: | sensitize the user to the pitfalls of innovations, mobilize public demand for adequate application of scientific knowledge. |
| Knowledge Builders as Linkers: | transfer through gatekeeping for the knowledge storehouse and through defining the goals of knowledge utilization; transfer through maintenance of a dual orientation: scientific soundness and usefulness. |
| Practitioner as Linker: | transfer to clients through practices and services which incorporate the latest scientific knowledge. |
| User as Linker: | link by taking the initiative to seek out scientific knowledge and derive useful learnings therefrom. |

The relative importance of the different roles varies from one RUS to another, but particularly notable is the wide range of roles which RUSs undertake. The effectiveness with which these diverse roles are fulfilled seems to be a function of both the individual RUS's talents and the organizational structure and climate in which he operates.

## Change Agent Programs

In presenting the need for better communication between knowledge sources and potential users, Rogers (1967) cited the widely known agricultural county extension agent as the prime example of the change agent role in our society. As a purveyor of new ideas to his farmer clients, the county agent seeks to promote changes that are in the client's interest. Rogers notes that the county extension agent is part of a macro-system which incorporates a national network of agricultural experiment stations and universities as knowledge sources committed to furthering the knowledge needs of farmers and agri-business. With basic support from the federal government at about $110 million in fiscal 1974, and substantial financial commitments from state and local governments, the annual funding level for all County Extension Service (CES) programs exceeds a quarter of a billion dollars. The county extension agent has had the benefit of a long history as a credible resource to his clients; he also has a well organized and powerful array of resources to tap in meeting the farmer's needs. If he is in need of consultation, he can call upon university-based extension specialists who combine research competencies with expertise in particular fields. The CES functions in conjunction with a private system of product, information, and service distribution (Havelock, 1971). These complementary activities lead to a market for commercially introduced innovations, and the private marketing network relieves the CES of the costly distribution function.

Since SRS initiated the RUS program, a similar program has been started with support from the U.S. Office of Education. In this Pilot State Dissemination Program described by Sieber (1973), the goal was

> to try out and develop a new system for the diffusion of information to public school and state education agency personnel. The critical feature of the program was the employment of education extension agents who were to live in the target area of the schools and refer the needs of clients to an information retrieval center in the state department of education. The retrieval center in turn would provide information in the form of abstracts, microfilm or hard copy of reports and articles, or technical assistance. Computerization of the retrieval process was also part of the program mandate. . . . In addition to these dissemination and implementation functions, it was permissible for the field agents to try to improve communications between school districts, to consult in their own specialty and to inaugurate teacher workshops or inservice programs. As befits a pilot program, a good deal of operational flexibility was permitted and even encouraged.

As Glaser and Backer (1973a) note, the Educational Extension Specialists program differed from the RUS program in that the educa-

tional specialists had direct access to a computerized information retrieval facility and were responsible for a much more restricted territory (one or two counties). In addition, Office of Education final evaluators were involved at the outset in designing both the programs and the training plans for the specialists.

The National Science Foundation, also concerned with putting the fruits of research and technology to work on national problems, has recently established the RANN program, Research Applied to National Needs. RANN has underwritten a broad spectrum of integrative studies to identify knowledge and technology which promise to alleviate national problems. In 1974, RANN has contracted with Public Technology, Inc. to test the impact of technology-wise change agents in local and state governmental units throughout the country.

**SRS Research Utilization Specialists**

One of the major recommendations in the final report of the VRA Research Utilization Task Force was to establish the experimental change agent program originally suggested by Rogers. By June 1968 Research Utilization Branch staff had developed Guidelines for Research Utilization Specialists (RUB, 1968a) which identified the purpose of the state RUS as promoting "the actual use by practitioners of new research findings so that more and better quality rehabilitations can be achieved." Hence, the RUS was seen as a link between the products of the research community and the practitioner. He was also expected to learn and communicate the knowledge needs of program staff to the knowledge-producing research community and to VR agency administrators. The Guidelines specified RUS qualifications and job functions, and offered suggestions on placement within the agency and relationships between the RUS and SRS regional and central office staffs. Revised once during the five-year project period, the Guidelines provide a useful context in which to review the diverse activities of the RUSs as reported in this volume; a copy of the 1968 Guidelines is presented in Appendix A, a copy of the 1970 revision in Appendix B.

Under the direction of George Engstrom, Chief of the Research Utilization Branch, a planning committee including representatives from SRS, RSA, and the University of Florida met in August 1968 to review plans for implementing the Research Utilization Specialist Project (RUB, 1968b). Edward Glaser of the Human Interaction Research Institute in Los Angeles and Everett Rogers from Michigan State

University served as consultants. Both had participated in the 1966 Miami Conference and had conducted extensive studies in the field of dissemination and utilization of knowledge. In light of the broad guidelines and the potential variety of roles suggested by the committee, the prevailing opinion was to avoid the prescription of project models, roles, or responsibilities. To this extent the RUS demonstration projects conformed to Suchman's (1967) description of trial and error approaches for the preliminary application of innovations:

> The emphasis of pilot programs should be on variation—variation in the way the program is organized, in how and by whom it is carried out, where it is located, whom it reaches, etc. Flexibility, innovation, redirection, reorganization are all desirable, and attempts to structure or 'freeze' a program at this stage are premature.

The first of nine RUS demonstration grants was awarded to the Virginia Department of Vocational Rehabilitation. By June 1969, with eight additional projects having been funded in Massachusetts, New Jersey, Alabama, Wisconsin, Texas, Missouri, Utah, and California, the first VR change agents were in the field. All of the SRS regions were represented, with the exception of Region X in the Pacific Northwest.

At the end of the third year of the RUS demonstration, SRS funded an independent evaluation conducted by Edward Glaser & Associates (EGA) of Los Angeles, California. In a three-year study, EGA assessed the impact of the RUS projects on service delivery in the nine participating states and determined the effectiveness of the RUS model in promoting research utilization in state vocational rehabilitation programs.

The difficulty of evaluating "complex projects in complicated organizational settings," led EGA to conduct the study using the "clinical approach to program evaluation"; that is, using multiple measures to look at the RUS program systematically from several viewpoints (Glaser & Backer, 1972). The evaluation methodology included intensive document analysis, four-to-six day field visits with interviews and direct observation, and the administration of survey questionnaires. Documents reviewed included project progress reports; project documents and publications such as correspondence, newsletters and activity logs; state agency records; and material pertaining to the projects issued from SRS's Division of Research Utilization.

The consultants, who made the site visits, interviewed the RUS, his immediate supervisor, the state director, other agency administrators, field supervisors and counselors, and staff of the SRS regional office.

They also attempted to trace the impact of specific RUS-originated projects and change efforts. Each RUS project state was visited twice by the evaluators. Questionnaires assessing knowledge of and satisfaction with the RUS and his project, along with attitudes toward research-based knowledge in general, were mailed to a stratified random sample of personnel in the nine state agencies. More than 1,500 questionnaires were completed and returned. In addition to their major goals, EGA evaluators also hoped to identify particularly effective RUS strategies and the agency conditions which facilitate or inhibit using those strategies. As this report is being written, the EGA evaluation is in its third and final year. Much data have already been accumulated, analyzed, and published, and information from the first year's findings was shared with the RUSs to help them in improving their last year of project operations. Findings from the evaluation are included in relevant sections of this report in order to clarify or enlarge on the reports given by the RUSs themselves. EGA has also prepared several extensive reports on the evaluation study (Glaser & Backer, 1973a, 1973c, 1974a, 1974c, & 1974d), including complementary documents such as *RUS Guidelines: A Sourcebook for Implementing a Research Utilization Specialist (RUS) in Vocational Rehabilitation Settings* (Glaser & Backer, 1974e) and a report on the proceedings of a 1973 conference between EGA and the RUSs (Glaser & Backer, 1973b). A final conference drawing representatives from state vocational rehabilitation agencies (general agencies and agencies for the blind) was held by EGA in February 1975.

# PROJECT BACKGROUND

## THE RUSs

The RUSs were an experienced group of rehabilitation professionals. Most had worked as counselors, supervisors, and/or program specialists at the state office level. Several had master's degrees; two of the three who held Ph.D.s had specialized in rehabilitation counseling. During the five-year demonstration period the turnover rate for the RUSs was, for the most part, low. In three states (New Jersey, Alabama, and Wisconsin) the same RUS remained in his assignment for the full period. In Virginia the present RUS has held his post since the first two months; in Missouri the RUS originally appointed served only one month, and his replacement headed the program throughout the remainder of its four-year life with the state agency. In two other states the project had one person responsible for four years. A short biographical sketch of each is presented below.

### Alabama

Homer Jacobs, the Alabama RUS, was also an Assistant Director of the state agency. Jacobs had six years experience as a teacher and teacher-trainer for the state's Vocational Agriculture Department and 14 years as a counselor, area supervisor, and state office supervisor in charge of public relations, training, and staff development. His undergraduate and graduate training were in vocational and adult education and school supervision.

### California

California had three RUSs. The first, George Allen, was new to the agency when he began his work as RUS in November 1969. Allen holds a Ph.D. in rehabilitation counseling and has experience as a counselor

and counselor-educator. In January 1972, after serving for 28 months as the California RUS, Allen transferred to an administrative position. Morgan Vail was appointed his successor.

Vail had spent almost 35 years with the California State Department of Rehabilitation as a counselor, supervisor, district administrator, and training officer. Trained in political science (B.A.) and educational counseling (M.A.), with an additional year of postgraduate study in counseling, his areas of expertise are management techniques, management by objectives, and training for both staff and clients. He retired from the agency late in 1973 after serving as RUS for 23 months.

Six weeks after Vail's retirement, Fredric Schlamp became the third RUS and served the remaining four months of the demonstration project. Schlamp's Ph.D. is in clinical psychology; he has worked for the past 17 years in state welfare, youth authority, and rehabilitation programs. He is experienced in clinical practice, teaching, and statistical analysis, research design, and computer processing. As Assistant Chief of the agency's Research and Statistics Section, he attended the first RUS training session before Allen was hired for the position. EGA evaluators (Glaser & Backer, 1974a) characterize Schlamp as "a research scientist at heart . . . who also recognizes that applied research and informal communication networks are necessary . . . to achieve results of practical significance."

## Massachusetts

The first Massachusetts RUS, Francis Laverty, became ill in June 1970 and died in September. He was succeeded in October by Edward Tully, who served as RUS until the completion of the project.

Tully holds master's degrees in rehabilitation counseling and diplomacy, with an additional year of post-master's training in rehabilitation counseling. His work experience includes several years as a general caseload counselor and PA/VR special project counselor and four years as a program specialist in management and training. As supervisor of the agency's training unit, Tully conducted bi-monthly, three-week orientation workshops for new agency counselors. By Fall 1970 when he assumed the position of RUS he had conducted the orientation session for one-half of all the counselors employed by the agency at that time.

### Missouri

Erwin Buchanan came to the project in the second month of operation and served as Missouri's RUS until the project was terminated. He has extensive experience as a general caseload rehabilitation counselor and as a district office supervisor.

### New Jersey

Adriano Marinelli served as New Jersey's RUS throughout the five-year project. He has a master's degree in education (majoring in vocational rehabilitation), and 18 years experience with the New Jersey VR Agency. In addition to five years as a counselor and four as a district supervisor, he is experienced as a VR agency program development specialist in model cities, cooperative area manpower, services to the disabled, and research and statistics.

### Texas

Anne Kohler served as the Texas RUS for four years before her assignment as Director of Research Utilization for the Texas Governor's Committee on Aging. She holds a master's degree in psychology and has worked as a rehabilitation counselor and psychiatric social worker. During the fourth year of the project a major reorganization within the agency resulted in the appointment of Randall Scott as RUS. Scott was educated in the social sciences and had graduate training in rehabilitation counseling. He has worked as a rehabilitation counselor and facilities specialist for the Texas Agency.

### Utah

Four persons served as the Utah RUS during the five years of the project. The original RUS, Jerome Zummach, was an agency counselor prior to his appointment and served as RUS only a short time before being promoted to counselor-supervisor. He was succeeded by Herb Mote, an agency counselor for many years, who was promoted to counselor-supervisor within a few weeks. The third Utah RUS, Charles Le Baron, served for one year; in December 1971 he was promoted to Coordinator of Personnel and Employee Relations and Executive Secretary of the Utah Governor's Committee on Employment of the Handicapped. Ralph Gant, a counselor-supervisor, was then assigned RUS and served in that capacity for two and one-half years until the

completion of the project. In addition to his DVR experience and work as a high school teacher, Gant worked closely with DVR during his tenure as a Student Services Counselor in the Utah Junior College System where he developed educational plans for disabled and educationally deprived students. Gant also had some experience in the planning and conduct of research studies.

### Virginia

The original RUS, Dale Hanks, served two months before being promoted to Assistant Commissioner for Program Planning and Development. Paul Bassett, the agency's newly appointed training officer, then became the Virginia RUS. Bassett, a former public school teacher and administrator, worked for several years as a Georgia state agency rehabilitation counselor and for two years as an instructor for vocational rehabilitation counselors with the Mental Retardation Training Institute at the University of North Carolina before joining the Virginia VR agency.

### Wisconsin

William Sather, the Wisconsin RUS, holds a Ph.D. in rehabilitation counseling. He has been an executive director of a county mental health association, and has had two years experience as a vocational rehabilitation counselor and two and one-half years as director of the state's DVR comprehensive statewide planning project.

### Discussion

In describing themselves and the previous experiences they found most helpful to their new roles, the RUSs highlight some of the major skills used in conducting their tasks. Scott of Texas elaborates on the value of previous experience as a rehabilitation practitioner, which

> provided valuable insight into agency operations and the functions of rehabilitation counselors. This enables the RUS to have a practical understanding of the needs of counselors.

A majority of the RUSs had training experience, as teachers in the public schools, as counselor-educators, or as VR agency training officers. Tully of Massachusetts comments on training as a relevant experience:

> At the time I entered the [RUS] program I had acquired a knowledge of the kinds of district office problems, training interests and needs, and professional strengths and weaknesses of sixty-four new practitioners. . . . It was the image as information giver, coach, and counselor that did much to foster acceptance among the agency's field staff.

A statewide perspective on agency operations can be acquired through working as a program specialist. Scott's work as a facilities specialist introduced him to research utilization on the job:

> Working in the Facilities Section provided an opportunity to perform some research utilization activities. Research reports, journal articles and other sources of information were reviewed for their potential to assist rehabilitation facilities personnel. While consulting with facilities' staffs or while performing on-site surveys, the Facilities Specialists were able to identify needs of the facilities. The available pieces of information, previously screened, were then retrieved to provide assistance to the facilities' staffs in meeting a particular need.

Marinelli (New Jersey) also brought lessons learned as a program specialist to the RUS role:

> As a Program Development Specialist, [I] learned the importance of involving the lower levels of the organization as well as the upper ones in trying to bring about program change. This experience also demonstrated the need for 'hard data' from which to make decisions regarding program change . . . [and] also provided an opportunity to develop relationships with key persons . . . which helped . . . to understand and . . . identify parts of the organization in which the climate for change was relatively ripe.

Several of the RUSs agreed with Sather of Wisconsin that knowing how to plan, conduct, and report research was an asset in the RUS role. When he received his doctoral level training, Sather acquired

> an appreciation of the principles of research design and the importance of utilizing research tools. . . . In his role as an RUS, he was able to work with others in conducting research to assess the effectiveness of vocational rehabilitation services.

Perhaps the eclectic nature of the training, experiences, and skills which aid an RUS is best summarized by Alabama's Homer Jacobs. In recounting his experience as a teacher, teacher-trainer, counselor, supervisor, and on up through the agency ranks to Assistant State Director, Jacobs notes: "These all added materially to a broad background that in many ways is essential to the function of an RUS."

## THE AGENCIES

The variability in the organization of the nine state agencies participating in the RUS demonstration is marked. As Table 1 indicates, there are substantial differences in size of staff, basic federal support, and numbers of clients rehabilitated annually. The state populations served by the project agencies range in size from 20 million in California to one million in Utah, and the composition of their catchment areas varies from dense inner city to sparsely populated rural farmland. In Massachusetts, Texas, and Virginia the VR agency is an independent arm of state government; in Alabama, Missouri, and Utah the rehabilitation program is part of the State Education Department. In the remaining three states, the VR agency is placed within the Department of Labor and Industry (New Jersey), the Human Relations Agency (California), and the Department of Health and Social Services (Wisconsin).

All RUSs were located in the agency's central office—Montgomery, Sacramento, Boston, Jefferson City, Trenton, Austin, Richmond, Madison, and Salt Lake City; organizationally they were most frequently associated with in-service training or program planning and evaluation. Organizational structure in several of the agencies, particularly Utah, Massachusetts, Texas, and Alabama, changed considerably during the projects. Changes ranged from straightforward retirement of a State Director (in Missouri), to revamping of the organizational structure affecting the RUS (Texas), to redefinition of the entire agency management philosophy, affecting a large number of key staff (in Massachusetts). The following discussion describes the agencies as they were organized in late 1974.

### Alabama

The Alabama Division of Rehabilitation and Crippled Children (DRCC) is part of the State Department of Education. For the first half of the RUS project, the Division's state office administrative structure consisted of the State Director, an Assistant State Director, and six state level supervisors. During FY 1972 the DRCC was reorganized into five operational units (Administrative and Field Services, including direct client services, personnel, training and staff development, and Social Security Trust Fund; Blind and Deaf Services; Facility and Third Party Services; Disability Determination; and Special Services, including Program Planning, Evaluation, and Research, public relations, and the Governor's Committee on the Employment of the Handicapped), and two staff sections (Fiscal and Data Processing).

TABLE 1

BASIC FEDERAL SUPPORT (SECTION 1), TOTAL REHABILITATIONS, REHABILITATIONS PER 100,000 POPULATION, COST PER REHABILITATION AND TOTAL STAFF--RUS PROJECT STATES FY 1973

| State | Basic Support, Section 1 (000 $) | Total Rehabilitations (#) | Rehabilitations/ 100,000 Pop. (#) | Average Cost Per Rehab. ($) | Total Staff (Man Years) (#) |
|---|---|---|---|---|---|
| ALABAMA | 15,751 | 7,770 | 223 | 2,744 | 691.7 |
| CALIFORNIA | 35,711 | 12,990 | 64 | 3,396 | 1,283.2 |
| MASSACHUSETTS | 11,596 | 5,148 | 89 | 2,758 | 431.0 |
| MISSOURI | 13,972 | 7,299 | 154 | 2,288 | 487.1 |
| NEW JERSEY | 13,249 | 9,900 | 136 | 1,655 | 430.5 |
| TEXAS | 37.677 | 24,735 | 216 | 1,916 | 2,038.6 |
| VIRGINIA | 15,172 | 12,782 | 271 | 1,510 | 1,079.7 |
| WISCONSIN | 12,271 | 9,896 | 221 | 1,555 | 351.6 |
| UTAH | 4,012 | 2,486 | 226 | 2,056 | 211.0 |

The Research Utilization Program was located in the Special Services Section, along with the Governor's Committee on Employment of the Handicapped, the Legislative Liaison, and Publication and Report Services. The RUS was Assistant State Director for the Section. As one of five Assistant Directors, who reported directly to the State Director, the RUS was among the prime agency decision-makers.

The prerogative for suggesting policy or program change in the Alabama agency rests with top level management. Suggestions for change in the case service delivery system are usually proposed to the State Director by the Assistant Directors after consultation with the agency area supervisors. The Director maintains sole authority for approval, alteration, or disapproval.

## California

The California Department of Rehabilitation includes the program for the blind and is composed of three divisions: Field Services, Field Support Services, and Management Services. Counselors, their supervisors, and the chief medical consultant belong to the Field Services Division, which provides direct client services. The Management Services Section is responsible for personnel, financial, and data processing support. Evaluation; planning, research and statistics; and facilities development compose the Division of Field Support Services.

Initially, the Research Utilization Specialist was located in the Field Services Division; even before the first RUS was hired, however, the position was functionally assigned to the Research and Statistics Section of the Management Services Division. Subsequently, the entire Research and Statistics Section was transferred to the Field Support Services Division; the RUS was transferred also, remaining in the Research and Statistics Section until late 1973 when he was moved organizationally to the Program Planning and Development Section. During the project, about 65 persons occupied a level comparable to that of the RUS in the agency hierarchy; about 20 persons were above him.

The third California RUS describes the agency as variable and flexible; suggestions for change can and do originate at all levels, and district administrators possess considerable autonomy for instituting change. Major state level changes are usually initiated by an issue memo submitted to the agency Executive Staff (the State Director, Deputy Directors, representatives of the Director's immediate staff, and selected Section Chiefs). The Director has ultimate authority regarding modification or adoption; actual implementation is assigned to an

appropriate staff member or to a Task Force formed specifically for the purpose. The RUSs did not belong to the Executive Staff, although they were sometimes invited to attend meetings.

### Massachusetts

The Massachusetts Rehabilitation Commission (MRC) is organized into six Divisions (Administration; Planning, Statistics and Research; Client Services; Community Programs; Disability Adjudication; and Staff Development and Evaluation); the state is served by a separate Commission for the Blind. The Director of Client Services is the Commissioner's Chief Assistant.

The MRC Commissioner resigned during the third year of the project, and the appointment of a new Commissioner late in the project's fourth year brought significant changes in the structure and staffing of the central office. Achievement and performance replaced seniority as the criteria of success, and many junior staff members were elevated to positions of authority. The introduction of management by objectives encouraged "full participation of all levels of staff in assuming responsibility and initiative." Decision-making was decentralized, opening the way for suggestions for change from all staff levels. In considering plans for significant change in case service delivery, the Director of Client Services now confers with the Commissioner and other Division Directors. After consultations with Assistant Directors and other key personnel involved in the change, the decision is made jointly by the Commissioner and Division Directors.

The RUS was assigned to the Research Unit of the Division of Planning, Training, Research, and Evaluation under the supervision of the Assistant Director for the Unit. He was organizationally four levels under the State Director.

### Missouri

The Missouri Section of Vocational Rehabilitation is located within the State Department of Education and is governed by a non-partisan State Board appointed by the Governor. The Board of Education sets personnel and program policies for the Section, and the Section Coordinator reports to the Commissioner of Education. Section programs (traditional VR services and Disability Determination) are carried out in 24 district and local offices. During the course of the RUS project the agency's administrative structure was changed to provide for two Assistant Coordinators who report directly to the Section Coordinator; the

state VR program was expanded by the addition of 10 district offices employing many new counseling and supervisory staff. Central office staff includes administrative staff, field consultants, and fiscal and statistical personnel. There are no staff positions for library, operations research, program development, or data processing personnel.

The Section Coordinator who originally agreed to the RUS project retired in June 1969, and an acting Coordinator headed the Section until October 1970. The first RUS was transferred immediately upon retirement of the Coordinator, and a new RUS appointed. A year later, the RUS was assigned the additional duties of agency in-service training officer. The RUS, officially titled Director, Research Utilization, was under the supervision of the Assistant Coordinator for Vocational Rehabilitation, two steps removed from the State Coordinator.

### New Jersey

The New Jersey Rehabilitation Agency is located in the State Department of Labor and Industry. Near the beginning of the RUS project, a number of the Rehabilitation Agency's administrative functions, including personnel, training, budgeting and accounting, and data processing, were consolidated with identical functions of the several agencies of the Department. Training, for example, became the responsibility of a central training unit whose staff had little knowledge of vocational rehabilitation and therefore placed a low priority on VR training. "This added layer in the organization made it difficult for the RUS to operate in selected areas," especially in using training as a resource.

Administrative Services; Field Services; and Program Planning, Development, and Evaluation are the three major divisions of the New Jersey Agency. The RUS was one of seven staff members in the Program Planning, Development, and Evaluation Section. The head of this section, his immediate supervisor, reports to the State Director. Marinelli worked in the same section as program specialist prior to his appointment as RUS.

### Texas

The Texas Rehabilitation Commission (TRC), a legislatively established independent agency, was created from the Texas Education Agency four months after the RUS demonstration began. It is governed by a Board appointed by the Governor. The state is divided into seven TRC regions, each headed by a Regional Director; 200 local offices are

located throughout the state. Plans for program change can be initiated by Regional Directors and their assistants; service changes are discussed by the Regional Directors in their scheduled monthly meetings.

As the result of a major reorganization in 1972, the TRC is currently divided into two major organizational units: Administrative Services (including personnel, accounting and data processing, purchasing and supply, and staff services) and Program Administration (staff development, research, planning, general programs, special programs, and disability determination). A Research Utilization and Library Section is one of six sections within the Special Programs Division.

The first RUS served until the reorganization; she was located in the Staff Development Section and reported to the Deputy Commissioner for that Section. The second RUS was located in the Special Programs Division, which includes programs for mental retardation, welfare, corrections, mental health, drug and alcohol abuse, facilities, and research utilization. He was supervised by the Assistant Deputy Commissioner for Special Programs, who reports to the State Director.

## Utah

The Utah Division of Rehabilitation Services is part of the Office of Adult, Vocational and Rehabilitation Services of the State Board for Vocational Education. The Division was reorganized several times, including major changes in state level supervisory staff, during the project. Currently, the Division's areas of responsibility—Case Service Administration, Case Service Supervision, Facilities, Disability Determination Services, Blind Services, Deaf Services, Personnel and Employee Relations—are headed by Coordinators who report to the Division Administrator. Suggestions for change in policy and practice are usually initiated at the Coordinator level. Other staff, including the RUS, are occasionally called upon to review proposals or suggest alternatives. The Division Administrator retains final authority for acceptance or rejection of planned change.

The first RUS began under the supervision of the State Director. Administrative reorganizations transferred the RUS position and responsibility for his supervision to the Coordinators of Case Service Administration and Facilities during the succeeding years. The fourth RUS was placed in the Division of Personnel and Employee Relations under the supervision of his predecessor; he was two administrative levels removed from the State Director.

## Virginia

The Virginia Department of Vocational Rehabilitation became an autonomous Department of state government in 1964. Its Commissioner is appointed by the State Board of Vocational Rehabilitation; members of the Board, who serve staggered terms, are appointed by the Governor. The Board sets VR policy for the agency in accordance with the law.

The agency is organized into six major divisions: Commissioner's Office, including a Deputy Commissioner; Operations; Disability Determination; Administrative Services (responsible for fiscal and property management); Woodrow Wilson Rehabilitation Center; and Program Planning and Development. The RUS was Director of the Research and Special Studies Section, Division of Program Planning and Development.

The Virginia agency grew rapidly during the decade beginning in 1964. From 39 counselors, the counseling staff grew fivefold, numbering over 200 by 1974. Bassett notes that new programs, extension of services to secondary schools, correctional institutions, and mental hospitals, and the granting of full departmental status to the agency "have contributed to establishing a *modus operandi* of change." EGA evaluators felt the Virginia agency has an "almost ideal" climate for research utilization, since opportunity is limitless in an agency with "strong leadership, sophisticated professional staff, [and] maximum community involvement in program activities."

## Wisconsin

The Wisconsin agency was reorganized in 1971 into five Bureaus: Client Services; Administrative Services; Planning, Evaluation, and Program Development; Services to the Blind; and Social Security Disability Insurance. The RUS was the Chief of the Research and Project Management Section, one of three sections within the Bureau of Planning, Evaluation, and Program Development, under the supervision of the agency Deputy Administrator.

Suggestions for program change in the Wisconsin agency frequently originate in the field and at times are implemented without consultation with the central office. During his five-year tenure, however, the RUS saw a trend toward requiring central office review and approval before implementation of significant changes in case service delivery. In such cases, the agency program specialists assume a major role, and differences of opinion between program specialists and district office

supervisors are mediated and if necessary resolved by the Director of the Bureau of Client Services.

## ORGANIZATIONAL CLIMATE

The demonstration agencies are a complex mixture of bureaucracy and politics, bound by tradition but pressured to respond to newly developed and conflicting state, regional, and national priorities. Staff at all levels bring to their work attitudes, opinions, and vested interests; friendship and strife flourish as each staff member works in serving his own and agency goals. Each agency, and groups within the agency, have unique degrees of receptivity to change; this receptivity varies with the nature of the change proposed. Throughout the country the pervading attitude among line practitioners and higher level staff toward research ranges from disinterest through low positive acceptance to open antagonism. At the extreme, researchers are mocked as ivory tower idlers, conducting research impractical for the real world and reporting it in incomprehensible jargon. Even the practitioners who think research findings can contribute to practice are thwarted in their efforts to use research by the admittedly difficult task of locating relevant documents and incorporating and synthesizing findings into field practice.

One of the most crucial aspects of the RUS projects was that they intended to bring about change based on research results. From all accounts, the agencies' climates were more positive toward proposed change than to research. The RUSs' comments on their organizations' climates for change, which follow, include not only attitude toward change, but attitude toward the RUS and the demonstration project as well.

Agency openness to innovation was perhaps most marked in California and Massachusetts. According to the third California RUS, the agency is frequently innovative, with changes being made in direct response to expressed need:

> The tenor of the counselors and clerks in the Department is quite outspoken. . . . The district administrator and regional administrators have staunchly upheld their right to support the positions of their . . . counselors where justified.

He adds that although the open climate (which allows for expression of needs, preferences for alternatives, and solution of problems with new knowledge) has supported a large number of innovative activities, most frequently innovations "were compiled with little thought to their

utilization potential in other areas, to their documentation, or to the dissemination of their findings." The climate was there, the transfer technology was not.

The Massachusetts agency had a much shorter history of openness to change, but the climate was nonetheless powerful for being new. During his tenure as RUS, Tully saw the organizational climate alter radically as a result of a change in top administration. Seriously constrained during his first years by top administrative refusal of free access to both field staff and the central office decision-making process, and feeling little more than a "glorified librarian," the RUS found an opening with the new Commissioner and used it to his advantage:

> From the time this Commissioner and his chief assistant, the Director of Client Services, learned that the RUS had the capacity to furnish information regarding relevant programs and innovative methods to meet the agency's needs, they gave their full backing.

Tully credits the dramatic change in agency climate toward more open communication, and the increased interest and activity in program development to

> the current agency head's firm belief in grass-roots participation, sharing information so that informed input may be obtained from all levels of staff, and speedy application of the best available information.

The New Jersey RUS experienced no overt resistance from field staff and reports that the absence of bureaucratic layers within the agency facilitated communications. He discovered, however, that the lack of overt resistance did not necessarily imply a climate conducive to change:

> In all likelihood, some counselors, supervisors, [and] administrators who had achieved a certain equilibrium in regard to their job, did not want it upset because of the resulting confusion and the painstaking effort that would be needed to return to a more comfortable mode of operation.

Response to the RUS project in New Jersey was mixed. The State Director and his top assistants gave it firm support, allowing the RUS freedom to interact with all levels of staff and to select areas of involvement. Marinelli felt limited, however, by the unresponsiveness of the newly centralized training division and his ability to obtain "only a very limited amount of objective information about the program from which determination of agency needs could be made." EGA evaluators thought that Marinelli also felt his prestige within the agency decreased somewhat upon his appointment as RUS. Overall, Marinelli felt that the

agency climate was encouraging, and ends his report on an optimistic note: "A number of roadblocks continue to exist, but time and persistence are expected to overcome them."

The Utah RUSs worked within the most overtly negative climate of the nine agencies; the fourth RUS characterized it as "basically unfavorable for the RUS project." Gant notes that, although barriers to change are certainly associated with organizational and staff characteristics, perhaps the most pronounced barrier in Utah was the structure of agency priorities. Research utilization was not a priority in the Utah agency at any time during the five-year project, and the RUS received little support from agency staff. The appointment of four RUSs in five years reflected the low value placed upon the program and accentuated the difficulties of establishing a viable RU program.

A similar climate existed in Missouri. Throughout his four years as RUS in Missouri, Buchanan served as the agency's supervisor of in-service training; his responsibility to the RU program was secondary. Field staff had little chance to exhibit an attitude toward research utilization, because they were almost universally unaware that the RUS project existed. Buchanan as in-service training supervisor was well respected and accepted; Buchanan as RUS was not recognized.

EGA evaluators characterized the Alabama agency climate as a combination of forces for change (the 1971 appointment of a management-conscious new director) and influences of tradition (old-line supervisors, counselors and staff). The 1971 organizational change had a positive impact on the climate for change within the agency. Jacobs felt

> a more direct and favorable contact with the Assistant Directors . . . they in turn promote research utilization with the field staff [they supervise] . . . as well as that area of the program.

The Texas and Wisconsin agencies were marked by a distinctive resistance to certain aspects of the RUS project as developed by the particular RUS (Anne Kohler and William Sather, respectively). The skills and preferences of the first Texas RUS focused the project toward regional and national priorities, thereby unintentionally creating dissatisfaction with the project and ultimately resulting in administrative reassignment and withdrawal of some of her audiovisual products from use in the state. The second Texas RUS complied with the top administration's desire that the project focus on the Texas agency and as a result operated under more receptive conditions.

In Wisconsin the central office climate for change "as viewed from the perspective of the RUS has at times been very poor. . . . The climate in most of the field offices has been good most of the time." Sather initially attempted to circumvent central office resistance by pursuing "non-controversial activities" with receptive staff members. EGA attributed much of the discontent surrounding the Wisconsin project to disagreements between the RUS and agency staff at several levels which may have been caused in part by the RUS's insistence that he pursue only those activities of interest to him and appropriate to his talents. Sather disagrees with EGA, believing instead that the problems stemmed from "the inability or unwillingness of some members of the staff to understand the RUS role." The RUS found the climate changing for the better during his final 18 months because of a "growing understanding and acceptance of RU project activities in general; acceptance of the RUS in the role of a program specialist who has a clearly defined area of program responsibility." Sather's second point is perhaps most telling in understanding the change in atmosphere. Indeed, during his final years, the Wisconsin RUS shed much of the role of a specialist in research utilization and operated instead as a program specialist in alcoholism.

As noted earlier, EGA evaluators characterized the Virginia agency as nearly ideal for research utilization; the RUS agrees that the climate was excellent and the agency brought to the project a *modus operandi* of change. He adds, however, that the "system for channeling, integrating and adopting new innovations was not [without problems] in the Virginia Agency."

The RUSs' discussions of organizational climate delineate the major sources of resistance to the RUS role. The most overriding and incontrovertible was the attitude of top level management. The RUSs' reports point to the following conclusion: *Unless the Agency Director and his advisors feel a need or see an advantage in the active RUS role the climate will remain ambivalent at best.* Access to needed information, resources, and line staff will be limited and the RUS will be diverted to non-RU assignments or confined by a passive role. In this case, significant impact is minimal, and field staff who may be open to the concept of RU will remain unresponsive and uninitiated since no reward and the possibility of negative sanction will apply to alliance with the RUS in his RU role. The RUS also may create a negative climate which did not exist before him and which is improved only by assigning a new person to the role. Texas, where the first RUS pursued priorities opposite those of management, serves as a significant example. The second Texas RUS pursued recognizable RU activities, as did the first,

but operated in a more favorable climate by accepting management's desire to change the focus of those activities. Insistence on a personal stance that is unacceptable to staff on the same level will also create friction related to something outside the research utilization role. The Wisconsin RUS experienced this as tensions mounted because of differences of opinion in the agency central office. Resistance was decreased somewhat by a change in role, but since the change involved a dissociation with research utilization in favor of a role as program specialist, the climate of the agency toward RU still remains in question. In general, an RUS must recognize the importance of sanction from top management and peers and he must accept the persisting indifference and fear of certain staff, despite strategies to circumvent or alter an unreceptive climate.

## STAFFING AND BUDGET

### Practices

Project budgets ranged from $20,000 to $50,000 per year (see Table 2), and EGA evaluators estimated that the total federal and state dollar investment (including staff time) approaches $2 million. Original project guidelines issued by SRS in 1968 provided for project budgets to include funds, on a 90-10 matching basis, for

> salary for a Research Utilization Specialist and a secretary, and additional funds for office expenses, necessary travel, consultants, short-term institutes, and research utilization conferences.

SRS further expected some of the innovations introduced by the RUSs to be developed through Expansion or Innovation Grant funds. (SRS Expansion Grant funds are awarded for the expansion of existing service programs. Expansion grant projects may have an evaluation component but cannot be pure research projects. The SRS Innovation Grant Program provides funds to allow state agencies to explore new methods for improving client services.)

Each RUS had at least half-time clerical support; five projects, Massachusetts, New Jersey, Alabama, Missouri, and Utah, were staffed by the RUS and a secretary only. Texas had the largest staff, a librarian, an Assistant RUS, and two secretaries. The Virginia RUS had a full-time librarian throughout the project, and Wisconsin and California employed research or project associates at intervals. The New Jersey RUS was supported for special projects by agency staff on detail. In

## TABLE 2[1]

## RUS PROJECT BUDGETS, FEDERAL FUNDS ONLY, FY 1973

| | CA | AL | MO[2] | WI | UT | MA | VA | TX | NJ |
|---|---|---|---|---|---|---|---|---|---|
| | ($) | ($) | ($) | ($) | ($) | ($) | ($) | ($) | ($) |
| PERSONNEL | 30,006 | 26,200 | | 32,128 | 20,514 | 14,176 | 22,880 | 38,732 | 26,390 |
| CONSULTATION | 675 | 400 | | 2,911 | 1,644 | 1,000 | 2,000 | | 540 |
| TRAVEL | 1,500 | 1,500 | | 1,000 | 562 | 1,600 | 2,800 | 1,300 | 675 |
| TELEPHONE | | | | | | | 540 | 270 | |
| OFFICE SUPPLIES | 200 | | | 180 | 180 | | 900 | 420 | 540 |
| POSTAGE | | | | | | | 450 | | |
| PRINTING | | | | | | | | 4,000 | |
| EQUIPMENT | | | | | 1,786 | 1,224 | | | |
| OTHER | 2,414 | | | 2,075 | 4,595 | | 2,430 | | 2,500 |
| TOTAL | 34,795 | 28,100 | 28,957 | 38,294 | 29,281 | 18,000 | 32,000 | 44,722 | 30,645 |

[1]From Federal Statement of Grant Award.
[2]FY 1972 Figures, no breakdown available.

Alabama and Utah the secretary was also project librarian; Massachusetts and New Jersey used the services of a central agency library, and California was without library support for the final two years of the project.

Skilled secretarial help was essential to the smooth operation of what was otherwise a one-man undertaking:

> Without well trained secretarial assistance, the added burden on the Research Utilization Specialist seriously impeded his work, slowing some projects down to a walk and eliminating others entirely. If the secretary selected has been competent, and knowledgeable in areas of letter writing, library usage, filing and even speed reading, in addition to typing, the Research Utilization Specialist has been able to turn over many jobs to her completely. In a real sense, the person serves not only as a secretary but as an assistant. A number of the duties of a Research Utilization Specialist may be performed well by the secretary. Initial literature searches of published volumes . . . have been performed in a sterling way by secretaries [Schlamp, California].

Budgeting for support staff was managed in a number of ways. In Wisconsin, for example, the secretary's salary was charged to the regular program, and extra project funds were used to recruit limited-term employees (hourly wage, no fringe benefits) for short-range professional tasks. Secretarial assistance in Massachusetts and the second of two secretaries in Texas were paid with regular state program funds. In all project states except Alabama, Missouri, and Virginia the RUS had the support of research staff on the agency payroll. The Alabama RUS felt that the lack of research support limited his activities.

Creating, maintaining, and expanding an information base (most frequently a combination of the SRS Research Information System and the agency library) constituted a major portion of the RUSs' operating budgets. SRS supplied each project with one set of abstracts, indexes, and microfiche final reports. Funds for duplication, however, were the responsibility of the project. Virginia escaped funding constraints primarily because all operating expenses for the library, including the librarian's salary, were paid from regular program funds. Bassett notes that "had all library expenses been totally charged to the RUS grant, we would not have been able to operate at the level we did."

None of the projects were supported solely by federal project grants. In addition to a 10 percent state matching, RUSs frequently tapped agency training and special project funds. The New Jersey RUS went outside the rehabilitation agency and used special training grants, State Department of Education resources, and funding from the federal-state Work Incentive Program (WIN) for some of his special projects. The

Wisconsin RUS developed three grant proposals for submission to the Social and Rehabilitation Service; two were funded by the end of the demonstration period. The Massachusetts RUS, after having to return $20,000 at the end of the fourth project year because an innovation project could not be launched in time, recouped by translating his project into an SRS Expansion Grant proposal which was funded.

Consensus was that the project budgets were insufficient for effective project operation. The Alabama RUS felt severely restricted by his budget:

> The budget . . . has been so very limited that we have not been able to budget for additional information resources or equipment. . . . We estimate that during the [final] year we will spend approximately $8,000 from the regular rehabilitation budget in order to carry on the limited activities.

The majority of the RUSs felt restricted only in certain areas. The RUSs in Massachusetts, Wisconsin, and Utah would have liked more funds for special projects or workshops. The Wisconsin RUS needed additional funds to purchase information resources. The Texas RUS felt that another full-time RUS was needed and found the travel budget of $1,300 annually "grossly inadequate." In Texas, in addition to the salary of a second secretary, $5,000 of state program funds were used for information resources. None of the RUSs felt they had more money than they could have spent had the program been operating without internal constraints. Only the California project consistently returned between $4,000 and $5,000 of unexpended funds annually; this money was earmarked for special projects, and the third RUS cites difficulties in receiving state level legislative and agency approval of expenditures and not lack of need as the reason for the return. Some monies were returned by other projects because of inability to hire a consultant, restrictions on out-of-state travel, and agency accounting errors.

### RUS Recommendations—Staff and Budget

The RUSs recommend that the following categories be included in an RUS program budget: RUS salary, clerical support, information resources, printing, equipment, office supplies, telephone, travel, consultant services, and special project funds. Almost all RUSs agreed that the RUS and a secretary alone cannot handle such a program without library and research staff support. Specific suggestions from some of the RUSs follow:

*Staffing:*

Provide for more than one professional staff member, unless the agency employs adequate library and research support personnel [Jacobs, Alabama].

Library support is essential to the operation of an RUS project. Either include a librarian on the project staff, hire a secretary who can double as a librarian, or ensure sufficient manpower in a central agency library to serve the project [Consensus].

Do not skimp on the money required to obtain a good secretary. Make arrangements to upgrade this position if necessary to retain a good employee [Schlamp, California].

When state civil service regulations prohibit hiring for special projects, consider contracting with outside organizations to perform the desired work. For example, in California the Institute for the Study of Crime and Delinquency is a non-profit corporation established solely to receive and administer grants for the state Department of Corrections. A number of similar non-profit organizations exist exclusively to serve state agencies [Schlamp, California].

*Equipment:*

Provide sufficient funds to purchase high quality equipment, especially the microfiche reader-printer [Schlamp, California].

Avoid the purchase of equipment for ongoing programs [Schlamp, California].

Develop a plan for purchase of equipment only after taking an inventory of equipment already available within the agency [Sather, Wisconsin].

*Information Resources:*

Allow for a Research Information Center. This is the life line of an effective Research Utilization Program [Bassett, Virginia].

Consider contractual arrangements for the purchase of services such

as literature searches which cannot easily be performed within the agency [Schlamp, California].

Be sure budget for information resources includes funds to supply both central and field offices [Sather, Wisconsin].

Funds for information resources can be conserved by using alternate library resources such as a nearby university library for expensive items (e.g., Psychological Abstracts), and by requiring personnel who receive books and periodicals at agency expense to place them in the agency library [Scott, Texas].

*Consultants:*

Budget liberally for consultant services [Bassett, Virginia; Schlamp, California; Tully, Massachusetts].

*In General:*

Plan budget expenses on a sliding scale. Costs increase as the program develops, and an RUS program can begin with a small budget, adding consultants, manpower, and special project funds as the program grows [Tully, Massachusetts; Bassett, Virginia].

Allow for adequate "risk money" [Bassett, Virginia].

Permit flexibility in the annual budget for emerging ideas which need immediate funding [Gant, Utah].

Plan to supplement the project budget with both agency special project and training funds and outside funds (local, state, or federal) for special projects [Consensus].

# DEVELOPMENT OF SKILLS AND RESOURCES

## TRAINING

*Next to the selection of an RUS, . . . training and preparation are of most immediate importance. Such training could assist him in better understanding his role in an organization, how to effectively relate with those within the organization, how to set a climate for change, how to use the resources of the organization to bring about change, how to organize a system to respond to the information needs of the Agency, and how to plan and carry out the process of integrating new and useful knowledge in response to Agency problems [Marinelli, New Jersey].*

SRS sponsored two series of training sessions for the RUSs. The first of these, four three-day sessions funded with RSA short term training monies, was held between June 1969 and November 1970 under the sponsorship of the Department of Rehabilitation Counseling of the University of Florida. It is this series that the RUSs usually refer to in reports on RUS training.

Planning for the University of Florida sponsored RUS training series began almost a year before the first RUS was appointed. In order to formulate a workable training plan, University of Florida faculty and research utilization consultants joined SRS research utilization and training staff to discuss the role and function of the RUS and his relationships to the myriad resources around him (RUB, 1968b). Members of the planning group disagreed about the amount of structure necessary. Some members believed the demonstrations should initially be unstructured and flexibly designed to sharpen skills in communication, consultation, needs assessment, organizational problem solving, and evaluation procedures (Glaser, for example). Other members believed that unless appreciably greater structure and didactic instruction were given, the RUSs would be unable to function effectively and the effectiveness of the program would be extremely difficult to assess (Dumas &

Muthard). The former view prevailed. Training was thus based on the following premise, recounted by Clark (1969), the RSA short term training consultant to the RUS training effort:

> Since no RUS had heretofore existed in a state VR agency, it was not possible to predetermine an orderly, systematic role development or training process. To do so would have been unrealistic in its disregard of the variations in agency settings and untenable in its disregard of research and theories in role development. In this light, it became evident that the training project itself should also be a demonstration in research utilization.

Therefore, trainers attempted to design sessions which would provide the RUS "knowledge, skills and professional community in relation to his new role," without espousing a particular point of view regarding roles and functions. Clark also says: "There would be no single authoritative voice around which to build the training."

The role definition adopted for planning purposes depicted the RUS as "an expert facilitator and transmitter of resources." Therefore, the training design included sessions to provide skills in communication, consultation, field interviewing, and human relations, as well as diagnostic, design, and evaluation skills in organizational problem solving. The intent was to assist the RUS "to develop the resources he would require rather than predetermine what he ought to be taught"; in other words, the trainers wanted to "provide a structure within which each person would be responsible for his own learning." Training requirements included homework assignments and a daily journal of activities written from the perspective of research utilization.

The EGA final report lists participants and outlines the contents of these training sessions (Glaser & Backer, 1974a). Briefly, the major topics covered were 1) the role and function of the RUS, 2) the research utilization process, and 3) change agent skills. Theory on the research utilization process was introduced at the first session by Everett Rogers. During the first two sessions, substantial time was spent in techniques for developing skills in interpersonal relations. These techniques derive from a model developed by Ronald Lippitt, who served as a major consultant in planning this RUS training series. In Lippitt's model, a 'change agent' is a consultant who collaborates with the client to convey knowledge of the change process. This model emphasizes consultation toward client self-help, and the importance of interpersonal relations skill training for the consultant and his client. The final two sessions followed a more structured format, including research utilization theory presentations by Ronald Havelock and Edward Glaser and skill training through workshops and individual and group consultations.

RUS final reports indicate that the first series of training sessions did not fully meet RUS expectations and needs. Lippitt's model for interpersonal relations skill training was perceived as "sensitivity" training and seen as unproductive:

> An excessive amount of time was devoted to the area of human relations. . . . Three of the . . . sessions began with 'free wheeling' discussions with no apparent direction [Marinelli, New Jersey].

> I failed to see too much value in the sessions which were conducted with all of us sitting around a table repeating what we 'thought we heard one another saying' . . . [Bassett, Virginia].

The time spent with recognized research utilization experts such as Ronald Havelock of the University of Michigan, Edward Glaser of the Human Interaction Research Institute, and Everett Rogers of Michigan State University, was received with greater enthusiasm. The RUSs responded favorably to presentations on the change process and theoretical models for introducing change, and felt Glaser's instruction in consultation techniques and process provided practical job skills. For Marinelli of New Jersey the problem solving workshops in which Glaser demonstrated consultation skills "not only provided answers to immediate problems which the RUS was facing, but illustrated [problem solving methods] which the RUS was able to adapt into practice." The RUSs also valued literature on the research utilization process and the opportunity to share problems and experiences with others working in similar situations.

Overall, the assessment was one of disappointment that the sessions were not more oriented to practical matters. Schlamp of California attended the first session and found the training "sporadic, undirected, and inadequate. . . . [It] provided few directions for actual activity . . . [but was] ideal for developing long range goals for the RUS position." Marinelli (New Jersey), who attended all four sessions, saw "the pieces of the puzzle" but felt he was given no help "to organize them into a cohesive process." The RUSs wanted more specificity, more suggestions for day-to-day activities, or, as Schlamp put it, an answer to the question: "What does one do?"

This first training series was designed on a feedback model intended to pick up any need for redirection in training efforts. Response to the first session led to the inclusion of State Directors and Regional Office liaison personnel in the second session. An advisory system was established at the end of the second session to provide input to the planning by RUSs, their State Directors, Regional Offices, and the research

community. Between the third and fourth sessions, it was decided that the training needed "a more flexible approach than one institution can provide." To this end Clark and Engstrom (1971) proposed to RSA administrators an RSA support system for the demonstration, of which training was but one component. Recommended training changes were: 1) setting up a separate training program for newly appointed RUSs so as not to disturb the cohesiveness of the original group, 2) training sessions in research utilization for state agency personnel, and 3) unique training for individual RUSs. The RSA support system never materialized.

The topic of the second training series was the SRS Research Information System (SRS/RIS). The three meetings in this series were also sponsored by SRS, and held March 1971, January 1972, and June 1972 at the Research Utilization Laboratory in New York City. The RUSs were introduced to the SRS/RIS, and were, in turn, expected to provide feedback on their ideas for improving the system in its developing stages. In addition, some research utilization training was interjected. The Massachusetts RUS

> found all this training and experience valuable. . . . The writing assignments on selected aspects of the Research Information System such as the preparation of the thesaurus and the completion of questionnaires on my activities and contacts with various segments of the RU network, [were] helpful in conveying the nature of the RU program and in providing considerable psychological support through sharing experiences, ideas and offers of mutual assistance.

The June 1972 session on the SRS/RIS was the last RUS training session, although EGA evaluators hosted a meeting of the RUSs in California in September 1973.

While hindsight is unquestionably more accurate than foresight, the lesson is clear. Content and structure are essential in training sessions for an RUS. Furthermore, content must be related to practical problems and activities the RUS will encounter in his work. As Schlamp of California notes, such a design is now possible:

> It is to the credit of the entire RUS project that information has been gathered which will permit the succinct statement of conditions under which the Research Utilization Specialist should work, his position in the agency, and his day to day activities.

## RUS Recommendations—Training

Focus on research utilization principles, techniques, and methods; avoid the sensitivity training focus on feelings and extended discussion of individual problems [Consensus].

Prepare a handbook on RUS training and practice with case histories and principles of change agentry [Tully, Massachusetts; Scott, Texas; Gant, Utah].

Supplement a series of seminars on the theories and techniques of research utilization with simulation exercises in a workshop format [Scott, Texas].

Increase the number of sessions with experienced consultants. Topics should include dynamics of governmental and bureaucratic organizations, motivation of individuals and groups to change, creating a climate for utilizing knowledge, open communication, and effective collaboration [Tully, Massachusetts].

Provide more opportunity to receive individual consultation and direction from noted authorities, including on-the-job consultation [Marinelli, New Jersey].

Provide exposure not only to research utilization models, but also to system design methodologies which are effective in promoting cooperative efforts in planning for program change [Sather, Wisconsin].

Provide information on methodologies for assessment of agency performance and measurement of the effects of specific program innovations [Sather, Wisconsin].

Publications of special use in training are *Knowledge Helpful for the RUS*, by Everett Rogers; *A Guide to Innovation in Education*, by Ronald Havelock; *Needed Research on Research Utilization*, by Ronald Lippitt and Ronald Havelock; *The Organization, Management and Tactics of Social Research*, by Richard O'Toole and *Organizational Arteriosclerosis: Its Diagnosis and Treatment*, by Edward Glaser [Marinelli, New Jersey; Tully, Massachusetts].

Provide for trainee review of information resources to be used prior to training sessions. This is especially useful when the author will be participating in the session [Marinelli, New Jersey].

Provide for formal or informal work experiences in coaching individuals or small groups in problem solving. This should include critiquing production or performance and working with attitudes and insights. The goal is to provide rapid development of capacity, confidence, and internalized use of new knowledge [Tully, Massachusetts].

Give each RUS the opportunity to make 3 to 5 day site visits to RUS projects in other states [Sather, Wisconsin].

Give each RUS the opportunity to make site visits to Rehabilitation Research Institutes, Research Utilization Laboratories, and Research and Training Centers [Schlamp, California].

Provide more supervised 'hands on' types of experiences [Marinelli, New Jersey].

## CONSULTATION ON RESEARCH UTILIZATION

At times, many of the RUSs made use of individual consultation to clarify, supplement, or buttress the information on the research utilization process provided during training sessions. The Virginia RUS used the services of a team of knowledge utilization specialists from Westinghouse Telecomputer Systems Corporation of Pittsburgh and conferred with staff of a local pharmaceutical manufacturing and sales company to learn techniques used in marketing commercial drugs. He also consulted regularly with the staff of the West Virginia Rehabilitation Research and Training Center. The Wisconsin RUS worked closely with staff from IDEAL Systems Design, Inc. on the application of a systems design methodology which he believed to be "particularly effective in helping people to work together in planning and implementing program change." He also consulted frequently with staff from the University of Wisconsin RRRI, the Arkansas Rehabilitation Research and Training Center, and the Chicago JVS Research Utilization Laboratory.

Several RUSs enlisted the services of Dr. Robert Ayling, a Washington, D.C. training and research utilization consultant who had led some RUS training sessions. Tully (Massachusetts) made the most extensive use of Ayling's services; his account of the consultant's seven visits to the Massachusetts agency is presented in full from his final report:

*First visit*: Met with administrators to assess their understanding and accept-

ance of the RU program; participated in a planning meeting with administrative staff and the Associate Commissioner, Federal Region I, in preparation for holding an RU staff conference.

*Second visit*: Presided at the RU staff conference for 35 agency personnel from all levels . . ., served as keynote speaker, and solicited responses to the new emphasis on action innovation projects as described in the revised RUS Guidelines of November, 1970.

*Third visit*: Provided technical advice on the preparation of the position paper on the RUS role and function, incorporating responses from the above-mentioned conference.

*Fourth visit*: Furnished technical assistance in organizing an RU Steering Committee and an innovative project on job placement; attended a meeting with Employment Security Administrators and the RUS regarding the possible use of the Job Bank as a part of the innovation project design.

*Fifth visit*: Attended the third meeting of the RU Steering Committee to advise on the drafting of a questionnaire on counselor's attitudes and activities in job placement to furnish a baseline for the innovation project.

*Sixth visit*: Assisted in the analysis of the results of the above-mentioned questionnaire and provided guidance in using research information input in designing the innovation.

*Seventh visit*: Furnished technical advice in the synthesis of the innovation design from inputs of staff via questionnaire and meeting with agency's former placement specialists, from a survey of the research literature on placement, from a task force on placement, and from the final meeting of the RU Steering Committee.

The consultant [also] provided the RUS with approximately twenty hours of tutorial on a variety of aspects of the RUS's role including: consultation techniques in generating good will and cooperation of organizational staff; strategies for accelerating organizational change through involving staff in planning, decision-making and implementation of RU activities; methods for improving two-way communication; and, appropriate documentation of activities for adequate evaluation of the RUS demonstration project.

From this experience, Tully recommends that an agency considering an RUS program engage a research utilization consultant to assist in planning during the initial months of operation. Tully sees this as essential to "avoid having the program get off to a false start," since the introduction of an unfamiliar specialist with an innovative role may be threatening to an ongoing service delivery organization with long established departments, staffing patterns, and seniority rights:

Such a consultant should have extensive experience in the conditions and problems of governmental organizations . . . in order to facilitate acceptance

of and collaboration with the specialist and [to] adapt the program to the needs of the organization.

It seems likely that the RUSs used consultation more frequently than their final reports suggest, tending not to report the repeated, ongoing, sometimes intensive, and often casual use of consultants from their state and local universities. The activities and projects undertaken reflect substantial linkage to the Regional Rehabilitation Research Institutes and the vocational rehabilitation oriented Research and Training Centers; much of this help was received without compensation or even labelling it as formal consultation.

## PROJECT ADVISORY COMMITTEE

RUS judgments on the usefulness of the project Advisory Committee range from "essential to the effective functioning of the RUS himself" in Wisconsin and "most helpful" in Alabama to a "waste of time" in Virginia. In New Jersey the Committee was extremely effective in gaining acceptance for the RUS and his program at all levels of the agency during the first years of the project. In Massachusetts the first Committee meeting became a forum for resistance and bolstered the uncooperative attitude of top administrative personnel.

Seven states had a formal Research Utilization Advisory Committee at some time during the project; a project Advisory Committee existed only a brief time in California, and Missouri worked through the existing committee for in-service training. Each RUS viewed the purpose of the Advisory Committee in a slightly different light, but almost all saw it as a mechanism for one or more of the following: 1) achieving and maintaining a relationship with the entire agency staff, 2) obtaining guidance, direction, and evaluation for program goals and activities, 3) obtaining specialist consultation on specific topic areas, or 4) obtaining the backing of top agency decision-makers.

The Alabama RUS enjoyed a productive relationship with a Committee of nine, including counselors, workshop and facility personnel, university training program staff, and the agency training and staff development officer. During the meetings, held twice annually, the Committee provided guidance, evaluation, and direction.

The Texas Committee, which was formed at the end of the first project year and met four times, was composed of both agency and non-agency personnel. Non-agency members included representatives from rehabilitation counselor education training programs, the

Oklahoma Rehabilitation Research Institute, the Texas Research League, and the Hogg Foundation for Mental Health. The Commissioner, Deputy Commissioner, and two Assistant Deputy Commissioners represented the Texas agency. The first and most useful Advisory Committee meeting involved discussion of the RUS role and procedures for implementing an RUS program; subsequent meetings primarily involved review of progress and plans presented by the RUS. Advisory Committee members, agency administrators, and the second RUS thought the Committee, as such, contributed little to the RUS project. Scott notes that the advice, assistance, and ideas for new projects and directions given by the Advisory Committee were valuable but could as easily have been received in individual consultation. Further, he reports some feeling among both members of the Committee and agency administrators that it would have been more efficient and effective to have had fewer administrators and researchers and more operational personnel on the Committee.

The formal Advisory Committee did not prove viable in Utah. The fourth Utah RUS reports that non-agency Committee members were often not knowledgeable regarding actual agency problems and needs. The Committee was disbanded in the third year of the project, and the fourth RUS substituted ad hoc committees formed to work on a specific problem and then dissolved upon completion of each task.

The New Jersey RUS formed his Committee with a specific purpose in mind: "So that . . . the project viewed the entire State Agency program in its search for problems on which to focus, instead of an unrepresentative section of the program." Members of the Committee were drawn from all staff levels and all geographic areas of the state. Meeting twice a year, the Committee formed a liaison between the project and agency staff, identified and clarified problems on which to focus, and assisted in establishing project priorities and developing strategies for action. Formal meetings were supplemented by individual meetings and telephone contacts. The RUS feels that broad Committee representation "negated extreme positions and gave ideas under consideration a full review." During the final project year, the Committee agreed to dissolve; by then the RUS had established more direct contact with all levels of agency personnel and the program had become known. Marinelli also substituted ad hoc committees to advise him on specific topic areas.

The Wisconsin RUS formed the smallest and most targeted Committee. Membership was limited to the RUS, the Agency Deputy Administrator, and the Director of the Bureau of Client Services. Through bimonthly meetings for reviewing plans and progress, the Committee

helped the RUS establish his position and enhance his working relationships with other agency staff. The RUS occasionally found the Committee members' decision-making powers useful in overcoming resistance to plans for program change.

In several states the Advisory Committee meetings proved merely unproductive, but in Massachusetts, the first meeting of the Committee was detrimental to the project. Tully formed his Advisory Committee in 1971, after reports from other projects indicated some measure of usefulness and success. Members included the RSA Regional Commissioner, representatives of the local RRRI and R & T Center and rehabilitation counselor training program, several agency administrators and staff specialists, staff of a private workshop, and a district office supervisor. The first meeting

> soon became dominated by the supervisor of the local district office. . . . He insisted that before any information should be released from any district office it was imperative to guarantee 'confidentiality' . . . to protect the reputation of personnel involved and the image of the district office itself.

The resistance needed only this one voice. Agency administrators issued no further notices concerning the tentatively scheduled additional Committee meetings that year:

> At the committee's final meeting a year later the membership was drastically reduced and the discussion dealt only with a carefully prepared agenda having to do with a proposal for an innovation project.

The RUSs' experiences seem to indicate that a formal advisory committee composed of membership from throughout the state and all levels of agency staff can do much to gain acceptance for and understanding of the RUS program, given at least a neutral atmosphere at the start. The broadly representative committee appears especially important if the RUS wishes to involve field staff in developing new approaches to their problems and job functions. Should the RUS and his superiors decide to focus on the RUS as a facilitator for the work of state level program specialists, it appears that a small group of key personnel may be used effectively.

Formal committees are, however, limited due to their fairly large size, making frequent meetings of the full committee difficult to schedule; further, unchanging committee membership limits the areas of expertise and specialized knowledge represented. The use of ad hoc committees formed for a specific purpose, composed of experts in the problem area, and dissolved after completion of their task, successfully complemented

or replaced the formal advisory committee in several states. The New Jersey experience, which suggests a logical evolution in the use of advisory and ad hoc committees, is worthy of further attention.

## EQUIPMENT

The RUSs used a variety of equipment, some purchased from project funds, some borrowed from within the agency. Most RUSs were able to purchase all necessary equipment within reason; the Alabama RUS, however, was denied approval for the purchase of a microfiche reader until the final year of the project. The following text describes the most important types of equipment mentioned by the RUSs and the various uses made of or planned for them.

### Microfiche Readers or Reader-Printers

The RUSs' primary source of usable research results was the microfiche set of approximately 2,000 final reports of SRS-funded research and demonstration projects. Microfiche are rectangular microfilm cards (often 4″ × 6″) containing up to 70 pages of text per card. A microfiche reader is necessary to read reports in this format; a reader-printer gives both reading and duplication capability.

All RUSs purchased at least one microfiche reader for the central office; several purchased reader-printers and/or additional machines for use in local offices. The Texas RUSs made the most extensive purchase of this equipment, buying 500 microfiche readers for all TRC offices, including over 200 field offices. Scott reports an increased demand for SRS final reports as a result. The Virginia RUS purchased his initial reader-printer at $1,200 for central office use and later bought 10 machines at a total volume purchase price of $1,400 ($140 each) for local offices. The Massachusetts RUS originally purchased six readers (five for field use), then rented four more of a more versatile model which could be used both for the SRS research reports and the state's Job Bank program. Six-month's field testing of the second model led to plans to purchase 25 to 30 of these machines for placement in local offices.

The experience of RUSs with microfiche readers and reader-printers suggests that these tools are unquestionably valuable and indeed vital in securing many government reports which are no longer available in paper copy. The available reports on microfiche include not only those resulting from SRS research, but also those from other HEW units such

as the National Institutes of Health and the Alcohol, Drug Abuse, and Mental Health Administration. Furthermore, having microfiche equipment permits economic use of the ERIC (Educational Research and Information Centers) system and the National Technical Information Service (NTIS), which accessions rehabilitation-related studies such as manpower studies in personnel assessment and training sponsored by the federal government.

Aside from being a critical tool for reading otherwise unavailable reports, the use of microfiche decreases storage space necessary and facilitates distribution by mail. All the reports generated by SRS research to date on microfiche do not fill a 14" × 5" × 27" microfiche file cabinet drawer; in paper copy a moderately large room with extensive shelf space is needed to accommodate them all. Furthermore, a 200-page report on microfiche can be dispatched by first class mail for the one ounce rate, while the paper copy, when available, would cost several dollars to ship by the same mode.

The characteristics and capabilities of available microfiche equipment were reviewed in a 1970 Defense Documentation Center publication (Gordon, R. F. *Microfiche Viewing Equipment*, Report DDC-TR-70-1, NTIS publication number AD-701-1 600). This publication can be obtained in microfiche ($2.25) or paper copy ($6.25) from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151.

## Audiovisual Equipment

Audiovisual equipment ranged in size and complexity from a cassette tape recorder to a video monitor, recorder, and camera. The combination of an *overhead projector* and *portable easel* was valuable to the New Jersey RUS in making presentations at staff meetings, and several RUSs used a *cassette player or player with slide projector* in staff development and training activities. The cassette recorder became a "ready notebook for recording observations and concerns" for the Utah RUS, although none of the RUSs used this resource to communicate among themselves. *Video equipment* and a *16 mm projector* were borrowed from within the agency by several RUSs for use in special projects. The most extensive plan involving audiovisual equipment—a traveling media center—was developed by Anne Kohler, the first Texas RUS. She was, however, unable to obtain a vehicle and equipment for the project.

### RUS Recommendations—Equipment

Equipment used most frequently should be small and easy to handle so it can be taken to distant field locations with a minimum of difficulty [Marinelli, New Jersey].

Video equipment is more flexible than other types of audiovisual equipment, but its size and complexity of operation frequently precludes use except in a centralized location where space is available [Marinelli, New Jersey].

Video equipment is an excellent tool for tie-in to the local Educational Television network [Gant, Utah; Jacobs, Alabama].

Smaller pieces of equipment are less costly to purch[illegible]d maintain [Marinelli, New Jersey].

When equipment purchases are contemplated, the RUS should establish procedures for acquisition, storage, and use. Since major purchases will be useful to other divisions within the agency, it may be reasonable to arrange for this through a division such as training [Schlamp, California].

Consider leasing rather than purchasing needed equipment [Schlamp, California].

Microfiche readers and reader-printers vary in quality and capabilities. Several models should be explored before purchase to be sure specific agency needs will be met [Schlamp, California].

Basic equipment essential to the library operation includes shelving and storage or file cabinets. These must be purchased if they are not available within the agency [Consensus].

## LINKAGES WITH THE RESEARCH AND TRAINING COMMUNITY

One of the major RUS project goals was to use the results of SRS-sponsored research in change activities in the nine agencies. The RUSs were therefore challenged with the task of establishing channels of communication not only with staff of completed and ongoing projects under grants and contracts, but also with a national network of special Research Institutes and Centers.

At the time of the RUS demonstration, this network was composed of seven Regional Rehabilitation Research Institutes (RRRI), ten Regional Research Institutes in Social Welfare (RSWRI), and 19 Research and Training (R & T) Centers. Each of the 36 organizations has a specialized core area of research; many of the R & T Centers conduct complete programs of highly technical basic medical research.

The network also included two Research Utilization Laboratories (RUL) charged with repackaging the results of basic research projects and promoting their use in the field. The RUL at the ICD Rehabilitation and Research Center in New York City concentrates on program evaluation and the vocational rehabilitation of the public assistance recipient; the RUL at the Jewish Vocational Service (JVS) in Chicago focuses on work evaluation and work adjustment. The research and evaluation activities conducted in-house by the state VR agencies are an additional link in the research network. Major training resources include the R & T Centers and university-based rehabilitation counselor education programs.

The value of establishing links with the rehabilitation research community is accurately summarized by Buchanan of Missouri:

> 1) This effort would serve to alert the Research Utilization Specialist (and the agency) to major research activity in progress and prospective proposals which would involve the agency staff and/or affect Vocational Rehabilitation programs.
>
> 2) It would enable the Research Utilization Specialist to be identified as a liaison person for agency contact.
>
> 3) It would develop additional resources for information acquisition.
>
> 4) It would serve to assist the Research Utilization Specialist in securing professional consultation to further his own activities within the agency.

Many methods emerged for developing research community linkages. Several RUSs had researchers on their Advisory Committees; the RUSs in turn served on the Advisory Committees of RRRIs, RULs, and R & T Centers. The New Jersey RUS corresponded extensively with the R & T Centers at the Universities of West Virginia, Arkansas, and Wisconsin-Stout State to obtain results of their research programs. The California RUSs assembled the newsletters from the R & T Centers at the University of West Virginia and the University of Arkansas, along with the *Linker* (published by the Virginia RUS Librarian), and distributed the package periodically to all field personnel. As a result of this effort both R & T Centers reported substantial requests for extra material from

California staff. In Texas, the RUS obtained a large amount of information from the three R & T Centers in Region VI for dissemination and used their training programs for agency staff. In fact, all of the RUSs, at one time or another, obtained background material from one or more research centers for use in their RU activities.

The Wisconsin RUS developed one of the closest working relationships with the research community, interacting extensively with both the Wisconsin RRRI and the Chicago RUL. On a major project to introduce a new measurement scale, the RRRI Research Director served as a resource person, explaining the scale at meetings of district supervisors, field counselors, and facility staff. At the close of the demonstration period, the RUS and RRRI Director were collaborating on plans for extensive use of the scale in agency program evaluations and preparing an audiovisual package to introduce the scale to agency staff.

In conjunction with the Chicago RUL, the Wisconsin RUS sponsored the introduction of prepackaged innovations into the state agency and several facilities. He also tapped the training resources of the R & T Centers. During the second year of the project, he joined the agency's Staff Development Officer in sponsoring two regional conferences on facilitative listening which were conducted by staff of the University of Arkansas R & T Center. Wisconsin DVR counselors then participated in a nationwide study of the rehabilitation process and rehabilitation outcomes conducted by the Arkansas Center. The RUS arranged for R & T Center staff to provide on-site training to seven agency counselors using an updated training package based on the Facilitative Case Management Model. Evaluation of this initial effort was in progress at the close of the demonstration period; if results are positive, the training will be extended throughout the Wisconsin agency.

The Texas RUSs also interacted frequently with the Special Centers in their Region; Oklahoma RRRI staff participated in and provided consultation for several RUS-sponsored workshops, and one research project recommended by the RUS is now being conducted by a Region VI R & T Center. The second RUS tried, but failed, in his efforts to convince the Texas Agency to participate in RRRI follow-up study. The interest he generated did, however, lead to an agency-conducted follow-up study.

Immediately upon his appointment as Missouri's RUS, Buchanan contacted the Missouri RRRI, 30 miles distant. He was appointed to the Institute's Advisory Committee, received assistance in securing information resources, and in securing professional consultation. During informal discussions between the RUS and RRRI Director on the

process of research utilization, an idea for a novel RU activity began to form. Conceptualizing information dissemination as occurring primarily in three modes—written, verbal (lectures, conferences, etc.) and experiential (group discussions, visits, special work assignments)—they began developing a strategy to capitalize on the value of experience in the adoption of an innovation. The result was the RULE project, Research Utilization through Learning Experiences, funded by SRS as a research and demonstration grant to the RRRI. Focusing on learning through personal visits, the RULE project brings state agency administrators and supervisory personnel responsible for program development to the sites of effective, innovative programs. Agency staff can see and hear firsthand about the process, problems, and outcomes of attempting an innovation and carry back to their own agencies the personal experience of proven new ideas.

As part of a plan to place copies of the SRS Abstracts and the accompanying *Index* in the hands of all state agencies in Region IV, as well as all the district offices in Alabama, Jacobs collaborated with the University of Alabama Rehabilitation Research and Training Center and the University of Florida RRRI to print 200 copies of the SRS Abstracts and Index. Copies were also made available to university rehabilitation training and research personnel in the region. Jacobs also consulted with the UF-RRRI on his plans to conduct a study of his techniques for introducing the use of SRS Abstracts to rehabilitation counselors. In addition, he remained in close touch with Region IV state VR agency research personnel and SRS-sponsored research centers through the Region IV Committee on Rehabilitation Research.

Although under no special constraints to do so, the RUSs tended to initiate and maintain communication only with SRS-sponsored vocational rehabilitation researchers. Regional Social Welfare Research Institutes were not used to great extent, although the Utah RUS did participate in a research utilization conference sponsored by the Denver RSWRI; contacts with researchers in psychology, education, and related fields are not reported.

Geography also played a part in the RUSs' interactions with researchers. Geographic distance particularly affected contacts with the RULs. Even though the New York City RUL was the site of several RUS-research community collaborative efforts, neither RUL was contacted extensively by RUSs outside their regions.

There is considerable evidence that the Centers used most frequently had research findings already past the developmental and packaging

stage. For example, the West Virginia R & T Center packaged psychological testing kits which could be used in the field. Further, the Missouri RUS notes that findings from the medically-oriented R & T Centers were too basic for short-term adaptation and adoption in the VR agency.

University-based rehabilitation counselor education programs were a resource for several RUSs. The Missouri RUS, who spends a substantial portion of his time in in-service training, worked closely with the local university training program. University staff assisted in developing in-service training programs and sometimes provided instructors. The Wisconsin RUS encouraged and assisted graduate students at the University of Wisconsin at Madison to meet their research requirements by conducting studies of potential value to DVR agency administrators and practitioners. Gant, the Utah RUS, also effectively used this technique.

Contact with directors of on-going or completed research was minimal. The New Jersey RUS did develop a working relationship with the director of an SRS-sponsored project at the Rutgers University Bureau of Economic Research; staff of the Bureau assisted him in developing an instrument to measure Case Difficulty of Rehabilitation Closures, and the RUS in turn provided them with documents from the SRS Research Information System.

During the demonstration projects, several efforts were undertaken to facilitate communication. The SRS Division of Research Utilization included R & T Center and RRRI personnel and RUSs in collaborative efforts on the SRS Research Information System and development of materials for preparation of PA/VR Expansion Grant proposals. The University of Florida RRRI sponsored a Regional Research and Research Utilization Committee with membership from SRS Center and Institute personnel in the Region, the Alabama RUS, and research and evaluation personnel of the Region's VR agencies. An informal newsletter "linking rehabilitation research utilization specialists, researchers, educators, and practitioners" was begun by Charles Chandler of the South Carolina VR agency. One of three "unofficial" RUSs who attended several RUS training sessions, Chandler volunteered to undertake publication of *The Change Agent* at the first training session. Although it was well received in the field, *The Change Agent* survived through only two issues, succumbing to time and budget constraints.

Despite all these efforts, systematic communication between RUSs

and researchers failed to develop; in general, the RUSs had somewhat lukewarm success in developing linkages with the research community.

Without formal communication channels, the RUSs were dependent on their personal contacts or individual styles. Schlamp reports that the first California RUS was "fortunate in knowing personally a large number of the active researchers in rehabilitation. During the time that he was RUS, he could, and did, draw from this almost intuitive knowledge to obtain information." On the other hand the second California RUS had few ties to the research community but strong ties to professional practitioner organizations such as the National Rehabilitation Association and the Institute on Rehabilitation Services. These were substituted by him as sources of information for innovation. Schlamp had few ties in either direction and felt the lack keenly: "The RRRIs failed to provide a continuous program of intercommunication between themselves and the RUS." Whether Schlamp is justified in assuming that the burden for establishing such communication channels should rest with the research Centers and the federal government is moot; he did not wait for this to happen, however, but began his own efforts to obtain at least written information from the Centers.

In summary, as things are now organized, the RUS must make and maintain contacts with the research community. He cannot afford to wait until he is contacted and cannot depend on even the best organized facilitative techniques to do this for him.

## "NEED SENSING" RESOURCES

"Need sensing" is a term coined by Ronald Havelock (1971) to describe activities leading to the discovery of pressing needs among members of a potential consumer group. It is an aspect of "need processing," that is, all the activities involved in communicating user needs to resource persons. The importance of need sensing is captured by the Virginia RUS:

> The extent to which a change agent is able to sense his potential consumer's needs and design his activities to accommodate these could be a key in the effectiveness of a research utilization program. Many consumers may resist a change agent's efforts until they can be convinced that the change agent is interested in the consumer's well-being.

Need sensing resources used in the RUS projects included networks of communication, special studies, and surveys. Need sensing activities were conducted with all levels of agency staff. Since needs are ex-

pressed differently at each level, the resources chosen by the RUSs to tap them depended on the primary target audience. A thorough description of the need sensing activities and outcomes for the RUSs cannot be made here since the RUS reports lack details of what was done, with whom, and with what results. Below is a summary of some of the major need sensing resources developed by the RUSs.

*Access to the decision-making process* proved to be an excellent method to uncover and target RU[illegible]ties to agency priorities. Such access was often direct, as with [illegible]abama RUS who was himself an agency decision-maker, or the New Jersey RUS who met formally with the state director at least once weekly and informally with him and other state office supervisors daily; the fourth Utah RUS also was a part of the senior staff who prepared the statewide program plan. Access was sometimes indirect; for example, through documents prepared by decision-makers.

*Access to top management staff,* although outside the decision-making process; also resulted in knowledge of agency needs as expressed at this level:

> Excessive time spent in determining the relevant needs of the agency's staff is probably egotistic and self-aggrandizing. State administrators must have intimate and complete knowledge of the practice and needs of their state program [Schlamp, California].

Schlamp suggests, in effect, the futility of conducting small research utilization projects if top administrators are unaware of field needs. He calls for "a complete management study, including a study of the communication network, training methods, and an analysis of the informal cultural context of the entire agency."

Access to top administrators was of unquestionable value when determining needs on which to focus research utilization activities. The Massachusetts RUS felt, and was in fact, relatively ineffective during the time he was not allowed to attend senior level staff meetings. Throughout his entire tenure as RUS, however, Tully "made the agency's priorities [my] chief guide."

*Special studies and surveys,* usually termed needs assessment studies, were valuable in indirectly assessing field needs. At the beginning of the project several RUSs used some form of questionnaire to solicit needs from field staff. In Texas, the RUS conducted a needs assessment study during the first year of the project; a year later the local R & T Center supplemented the results with a similar study. The

Alabama RUS notes that "This was perhaps the first activity that generated some interest in the use of the research material."

Needs assessment surveys served the dual purpose of eliciting information on needs and alerting the consumer to needs he had become complacent about. In Missouri

> the surveys were used to identify and document specific training needs and to create an awareness in the staff of these special needs. During the process of survey work and analysis, there was generated considerable staff acceptance. . . . Although these surveys perhaps were not as sophisticated as they could have been, the purpose for which they were designed seemed to be met.

Some RUSs formed *groups specifically for need sensing*. This technique was not widely used among the projects, although Advisory Committees sometimes functioned in this fashion. The two most striking examples are the New Jersey Advisory Committee and the Inter-Agency Task Force established by the Massachusetts RUS during the first year of project operation specifically to "identify areas of concern to counselors and supervisors." The following is Marinelli's account of a need sensing activity of his Advisory Committee:

> As a result of chronic complaints by field personnel on various aspects of the Policies and Procedures Manual, the RUS initiated a series of discussions with line staff persons which resulted in a decision to conduct a thorough evaluation of the Manual. With the assistance of the Research Utilization Advisory Committee, the RUS drafted and field-tested a Guide for conducting the study. The eventual Guide received administrative support. The Research Utilization Advisory Committee was assigned the task of collecting, organizing, and synthesizing information from the entire field staff.

The New Jersey RUS found that "the committee provided an opportunity for broad base discussion of issues which along with direct contact and occasional surveys gave the RUS a better feel of some of the agency's major concerns." However, as he gained in knowledge of the agency's program and developed relationships with all levels of staff, individual and group contacts provided more useful information about staff and agency knowledge needs than did the Advisory Committee.

In contrast to the New Jersey experience, the Massachusetts group of counselors and junior supervisors was ineffective as a need sensing resource:

> The newness of the . . . project and the uncertainty about the roles and functions of the RUS . . . aroused suspicion and defensiveness when the RUS explained that the purpose of the meetings was to find ways he could work with them to apply research findings in solving problems.

Group members did not believe that the RUS was interested in their problems only because he had information to meet their needs. Rather, many saw him as an "informer for the administration or a data gatherer for the director of research."

Another group structure for need sensing was the workshop, a particularly effective approach for the fourth Utah RUS. He budgeted about $1,000 annually for workshops as need sensing resources.

*Visibility* was an excellent need sensing resource; staff who had contact with and understood the purpose of the Research Utilization Specialist Program brought their specific problems to the attention of the RUS without extensive solicitation. The first Texas RUS began her work with a tour of Commission offices and facilities. The second RUS continued this tradition, and with the consent of his supervisor made frequent visits to the field to talk with counselors and supervisors. In addition, the Texas RUS addressed the orientation sessions for all new agency counselors, providing further visibility for the research utilization program. During the fifth project year, the Massachusetts RUS increased his visibility by participating in two Task Forces, enabling him to meet with administrative, state, regional and area office VR agency staff and representatives of community agencies and other state agencies.

The RUSs who prepared unsolicited information for potential users also benefited from increased visibility. The Massachusetts RUS resorted to this technique when he was not allowed access to central office staff:

> A means the RUS has found effective with middle management has been to forward selected materials calculated to meet their immediate need whenever that can be deduced, as for example when a new regulation affecting the individual's program is issued or when a study of consequence in their specialty area comes to the attention of the RUS. This initiative may be followed by a personal visit or phone call within a short time to inquire whether the information proved to be of value or if further information is desired. Sometimes this approach has opened the way to discussion of other means by which the RUS may be of help.

As the preceding example shows, needs were sometimes assessed from *information available in-house which did not involve direct contact with the consumer*. As a further indicator of possible field needs, the Texas RUS used data collected by the Program Evaluation Section during its regular visits to study field office operations.

The Virginia RUS was able to uncover deeper needs by *staying on the lookout for patterns in requests for information*:

> During the early development of the Agency's Public Assistance-Vocational Rehabilitation . . . projects, a deliberate attempt to 'load' *The Linker* . . . with new techniques . . . related to public assistance clients was launched. . . . A specific research study . . . received numerous counselor and supervisor requests. . . . We noticed particular interests . . . from two PA/VR units in the state and one Special Education-Vocational Rehabilitation Unit. Based upon this observation, it was decided that a follow-up by the RUS would be timely.

Bassett comments on the meaning of such patterns:

> When an unusual number of requests for a specific item exists, an assumption might be made that an interest in the item exists. If a pre-existing interest in a particular item exists, the chances are greater that the item will be marked.

The above example includes another technique to transmit unsolicited information—the newsletter. If such publications are designed to be "interactive," they become effective as need sensing resources. *The Linker*, prepared by the Virginia RUS Librarian, stimulated interaction at several points. It was designed so that staff could circle the numbers of publications they would like to read, clip that request section of the newsletter, and return it to the library. Publications circulated in response to such requests were accompanied by a slip requesting comments on usefulness of the document.

The RUSs experience indicated that the initial statement of a need is usually not sufficient to a complete understanding of the problem and the RUSs had to develop *methods to clarify the need*. Several found that receiving the message through several different channels helped. For example, in the initial needs assessment survey in Texas, many counselors requested information on rehabilitation facilities and their uses. The observations of the Facilities Section Staff, "who heard many complaints from the facilities' personnel about the Commissions' counselors and vice versa," indicated the counselors' requests involved more than a straightforward lack of information. The California RUS outlines another method of refining the original statement of a need:

> It had been found that most requests for information are . . . 'a cry for help.' Answering this cry with a brief review of literature does not help. It is important to know more intimately, and in detail, the needs of the requestor. In arranging such a discussion, the need sensing aspects of the Research Utilization Specialist are brought into play. . . . It is poor practice to answer any request for such services without at least one, and perhaps many, in-depth interviews.

In general, the RUSs did not make sophisticated attempts at need sensing, primarily because the techniques for doing so were not well

defined. Several were, however, quite creative in their efforts, and all recognized the importance of somehow relating their activities to expressed needs. The importance and value of learning the knowledge needs of agency staff depends in part on the role top administrators want the RUS to play and each RUS's personal role preference. The Missouri RUS needed few need sensing resources since the focus of his activities was established by his primary in-service training responsibility. The Wisconsin RUS used few methods for determining needs because he chose to focus primarily on one topic, alcoholism.

Perhaps the most organized and comprehensive approaches to need sensing were those of the New Jersey and Texas RUSs. The Texas RUS worked within priorities established for him by top management and used an extensive need sensing network to explore needs within each priority with target staff. The New Jersey RUS used an Advisory Committee to funnel needs to him from field staff and was, by virtue of his position in the "inner circle" of top administrators, able to relate those needs to agency priorities and establish fruitful areas for research utilization activities. The experiences of the RUSs also suggest that effective response to the information requests made by staff opens the door to learning the most pressing current needs and also to gaining clarification of those interests so they can be responded to even more effectively.

## INFORMATION RESOURCES

### SRS Research Information System

The SRS Research Information System (SRS/RIS) was the primary information resource for the RUSs. The SRS/RIS, based on final and special reports of SRS-funded research and demonstration projects, consists of 1) the complete report in both microfiche and hard copy; 2) a 1,000-word abstract describing the project purpose, methodology, significant findings, and usage potential; 3) an *Index* (Schultz, 1974); 4) a *Thesaurus* (Schultz, 1972), that is a standard language for indexing and cataloguing rehabilitation literature; and 5) an *Instruction Manual* (DRU, 1972). The system is neither automated nor centralized; duplicate sets of microfiche final reports, abstracts, and indexes are held by the RUSs, the Regional Rehabilitation and Social Welfare Research Institutes, and the Research Utilization Laboratories.

Development of the SRS/RIS was initiated about a year before the RUS demonstrations were begun and continued simultaneously with

them. The RUSs were among the first to receive the system components as they became available from SRS contractors. In addition to having early access to SRS/RIS materials, the RUSs were also the primary field testers of the system. They contributed many suggestions for improving the components of the RIS during three training sessions sponsored by SRS where they also collaborated in preparing the system *Instruction Manual*. Therefore, the RUSs were not provided an established information base from which to work, but were participants in the development of such a base for the field of vocational rehabilitation research. There is little doubt that this contributed to an early uncertainty about activities which might fruitfully be undertaken and diverted efforts from research utilization to concerns with cataloguing, storing, and retrieving information.

## Agency Libraries

There is much variation in the extent to which the RUSs found the agency library useful as an information resource. All had access to the existing agency library, and several had primary responsibility for its effective use by agency staff. Virginia and Texas employed full-time librarians who were directly responsible to the RUS and whose central objectives were to contribute to the RUS program.

Agency emphasis on the importance of the library ranged from Texas, where a professional librarian with a master's degree in library science established and maintained probably the most extensive rehabilitation research library in the state-federal system, to California, where (because of state reorganization and a physical move) the agency librarian was dissociated from the Department late in the third year of the project. In California, all books and periodicals were placed in storage and journal subscriptions were allowed to lapse for two years until the third RUS was appointed. At that point stored documents were recaptured and a basic vocational rehabilitation library was reestablished in the California agency.

Although Virginia and Texas had integrated RUS-library efforts, the autonomous library (either part of the VR agency or part of a larger organizational unit) was the more common arrangement. In New Jersey, for example, the VR program used the Department of Labor and Industry's library. Since this library was understaffed, the RUS and his secretary initially assumed primary responsibility for organizing and disseminating information. Later, the RUS assisted the Department Library in organizing rehabilitation literature into a special section. In a

similar pattern, RUS Tully worked closely with the Massachusetts agency's central library to incorporate RIS material.

Although the agency library collections available to the RUSs apparently included substantial book collections, their reports seldom note either the size of the collections or how they were used. Several, such as Scott of Texas, write that substantial funds were used to add books, journals, tapes, and films to the agency library during the five-year demonstration period. At the other end of the spectrum, the Utah RUSs had considerable difficulty getting approval for the purchase of library materials:

> As the RUS attempted to utilize appropriated funds for the development of Informational Resource Centers and Mini-Libraries, there was reluctance on the part of certain members of the administrative staff to approve the purchase of new materials. There was a feeling that there would be a lack of utilization of the requested materials and therefore the legitimate decision was sometimes made to return excess funds rather than expending them for *questionable* purposes.

Little mention was made of using the state library. In the only report of such use, Texas' RUSs made substantial use of the interlibrary loan services of the state library and also obtained valuable technical assistance on the operation of the agency library. In recent years these libraries (located in the same cities as the RUSs—the state capitol) have received greater state and federal support to enhance their capability as technical information centers.

## Journals

Although rehabilitation and professional journals from the social sciences were mentioned as a resource by a majority of RUSs, none specifies in his report the extent to which these journals were used. Periodicals and journals were the most popular information resource in Utah: "Perhaps due to the amount of time available to the rehabilitation professional, those journals have been most popular which could be read between client interviews or during brief periods."

Marinelli of New Jersey took the initiative of adding a feature to the RUS newsletter (*SPARK*) to link journal information to the busy practitioner. He included a list of the tables of contents of key rehabilitation journals, a novel feature which "captured the interest of those receiving *SPARK* more so than the older section containing the listing of recent books."

## Other Information Resources

In addition to the SRS Research Information System, and holdings of the agency library, the RUSs tapped the following for information:

Local university libraries

Staff of local universities, all departments depending on need

The National Technical Information Service, for non-SRS documents

Results of in-house research activities

Administrators and specialists in other VR agencies

VR agency state plans

ERIC—the Office of Education Research Information System

Psychological Abstracts

Abstract services such as *Quarterly Journal of Studies on Alcohol* and *Grassroots*

Institute on Rehabilitation Services (IRS) publications

SRS Research Centers

Although several reports acknowledge that much information pertinent to the VR field is contained in work being done in education, psychology, sociology, and the like, few RUSs used information outside the SRS research network with any frequency.

# ROLES AND FUNCTIONS

## GOALS AND OBJECTIVES

*The initial goals of the Research Utilization Project, both in California and nationwide, were so flexible they were nebulous. The refusal of the federal officials to provide specific guidelines may have been intentional, permitting the evaluation of different approaches* [Schlamp, California].

To some extent, the RUSs' discussions of goals and objectives are less fruitful and more pedestrian than other findings from the projects. Occupied with defining roles, developing and organizing activities, and gaining acceptance within the agency, the RUSs did not spend a significant portion of their time considering the refinement of goal statements. In general, they accepted the goals set forth in the two versions of the SRS Guidelines (RUB, 1968a; RUB, 1970) but viewed them as very broad and general; all RUSs modified the goal statements in action to fit their particular role.

The initial SRS Guidelines (1968) set forth three purposes for the RUS projects. The first of these—"to promote the actual use by practitioners of new research findings, so that more and better quality rehabilitations may be achieved"—was essentially the single most general goal which was to be achieved by RUSs serving "as an action link between the producer and consumer of research results, bringing new and more effective findings to the attention of practitioners and administrators" and "promoting . . . their adoption by ongoing programs."

Evidence from a year of project operation pointed to the need for better specification of goals and activities. In 1970, therefore, with the help of the RUSs and others, the project Guidelines were revised. In 1974, near the close of the demonstration period, staff of the University of Florida Rehabilitation Research Institute synthesized information from the SRS Guidelines, the *RUS Self-Rating Scale* prepared by SRS, and other sources, into seven goal statements for the projects:

1. To systematically determine the relevant needs of the state agency's staff for program and practice knowledge in order to focus RUS efforts toward meeting those needs.

2. To mobilize knowledge utilization resources and activities within the state agency. This includes building storage and retrieval capability for reports and abstracts and disseminating appropriate useful information to prospective users.

3. To encourage and facilitate the use of promising, cross-validated R & D findings or of other knowledge by staff and personnel of the VR state agency or collaborating agencies.

4. Through collaboration with staff or in some instances by the RUS's own initiative, start small projects which introduce new methods and knowledge into program and practice.

5. To help assure that research within the agency is planned, conducted, and reported in such a way as to maximize the likelihood that useful results will be produced.

6. To stimulate within the state agency a general atmosphere conducive to the thoughtful consideration of promising new knowledge, along with a willingness to use available resources and knowledge, and through that *modus operandi*, a thrust toward ongoing renewal within agency and program.

7. To assess the impact of various RUS techniques or processes used.

The RUSs were asked to comment on this restatement of the project goals in their final reports. Despite a number of misgivings about the lack of specificity and the problems associated with transforming some of the more ambiguous goals into action programs, this revision of the goals was accepted as useful. Even Schlamp (California), sharply critical of the goals as initially established, did demur to say that the seven revised goals "probably represent as adequate a brief statement as has been made." Tully of Massachusetts assesses the goals as

> relevant and integral aspects of the role I have carried out, each in varying degrees as the occasion required, sometimes combining several to deal with a situation or answer a request. All were necessary in conducting the full-scale innovation project on placement. . . . Goal six is the most fundamental or generic of all these goals because it relates the RUS's program to aligning staff activities with the agency's official purpose, and by increasing staff capacity

to achieve that purpose, it provides a legitimate framework for the remainder of the RUS's goals.

Furthermore, Tully sees the seventh goal as "unusually apt and necessary since in the last analysis it is the evaluation or measurement of the quality of the other goals."

## The Goals in Practice

The RUSs generally felt that although the project goals outlined by SRS in the 1968 and 1970 versions of the Guidelines were a useful starting point, they needed some structure and direction. The most forthright statement of the limitations of the original goals follows:

> The original objectives were extremely broad and operational guidelines were essentially non-existent. Apparently the initial Research Utilization Specialist was given almost total freedom without guidelines outlining operating procedures. The RUS sometimes acted without the commitment or knowledge of some administrative personnel. Consequently, the RUS attempted too many projects without sufficient resources to accomplish desired goals, and did not have adequate administrative support.
>
> Therefore, the goals of the program have been made more explicit, operating procedures have been more clearly defined, and Research Utilization has been made a part of the Special Programs Section where it has better administrative support.
>
> The original goals still apply, but they have been clarified. The main objective of the Research Utilization program is to meet the research information needs of field staff. Next, the RUS provides assistance to Central Office personnel, especially to the sixteen Program Specialists [Scott, Texas].

In specifying the goals he would set, Scott does not really amend or clarify the federal goals, but rather describes the rationale, methods, and actions he would use to attain them. He also makes a strong case for establishing administrative guidelines and policies for the RUS program within the state agency employing the RUS.

Marinelli of New Jersey notes a change in emphasis during the demonstration period:

> The change has been a lessening of research dissemination . . . activities with a concurrent increase in efforts directly aimed at relating and applying research to agency identified problems. . . . Dissemination activities became secondary to research or knowledge utilization directed at solving agency problems.

Several RUSs proposed or put into operation amendments to the goals in the form of action steps or subgoals. Scott suggests that the responsibility for establishing priorities should belong to administrative personnel, leaving the RUS to

> concentrate his efforts to determine what needs exist in these priority areas and how research can help solve them. Often the RUS will find needs for which there is no solution, thus disappointing those who sought assistance. He will also be so deluged by requests in peak periods that none can be adequately answered.

Scott's experience fostered a number of action-goal steps. He urges that in the future all reports to field staff be free of technical jargon and that

> the RUS . . . actively seek feedback from potential users to determine the usefulness of materials and whether or not modifications of the data are necessary. The RUS can become too deeply involved in small projects which he initiates himself. It is usually more efficient for the RUS to attempt to get other staff members to adopt projects as their own and to carry them out with only minor assistance from the RUS. The most practical and most effective method of determining whether or not various RUS techniques or processes are utilized is simply to ask a person who used the information.

Jacobs of Alabama notes that even though working with state level personnel, especially the staff training and development officer, remained a prime objective throughout the project, he

> dropped the idea of accumulating final reports and pushed the idea of abstracts for use not only in the State office but in field offices. The idea of promoting the use of all rehabilitation literature including research findings and recommendations and working with staff at all levels has been one of our prime goals which has evolved.

The goal of encouraging the use of already existing research results was usually interpreted to mean R & D findings resulting from SRS-supported projects. Although this somewhat parochial view of knowledge resources was disavowed at training sessions and by SRS project managers (for example, the 1970 Guidelines stress the use of knowledge from many sources), the thrust of support activities confirmed a Central Office interest in exploiting the SRS/RIS and provided neither help nor incentives for reaching out to other knowledge pools.

SRS planners and consultants had hoped that the RUSs would stimulate new research by bringing practitioner needs to the attention of the research community. Although this was not included among the goals enumerated for the project, it is mentioned in several official documents, including a journal article (Engstrom, 1969) in which the

SRS project manager states: "Equally important is the RUS's ability to make known to researchers the areas which are most in need of investigation." The possible conflict between the goal of applying existing knowledge to meet practitioner needs and the goal of developing new knowledge to meet those needs was discussed at the 1968 planning meeting. Rogers suggested that the two goals be conceptualized as respectively short-range and long-range. The immediate goal was to implement the results of completed research, but in the long run the RUS was to stimulate research in areas directly related to field needs and thus lessen the gap between research and practice. The RUSs resolved the conflict by concentrating their efforts on the short-range goal. Activities to stimulate new research were few, and the efficacy of such a goal for an RUS in a state VR agency was not tested to any great extent.

Although several RUSs list action steps and subgoals in their reports, the majority echo Gant:

> In terms of the Utah project, the goals and objectives have not and do not require alterations. . . . Furthermore, the same might be said of the national goals for the RUS program; they require little if any change.

What does seem to emerge from the RUSs' discussions of goals is a plea for clarifying and specifying the subgoals and action steps which an RUS should follow in applying the broad original goals to a particular setting in vocational rehabilitation. Such measures should be negotiated with both administrative staff of the host agency and any sponsoring agency so that an RUS can set acceptable objectives and know that they are congruent with the views of those to whom he is accountable.

## ROLE EXPECTATIONS

> *No clear concept of the meaning of 'research utilization' or of the ways in which such a process could function within rehabilitation has been identified* [Clark and Engstrom, 1970].

Constrained by this fact, SRS was not able to delineate RUS roles and functions with any specificity throughout the five years of the demonstration. Nor did they desire to do so. Instead,

> the states participating in this 5-year demonstration project will identify and formulate the role and function of the research utilization specialist as a linking agent between research and practice [Engstrom, 1969].

SRS planners and their research utilization consultants did, however, spend much time in exploring the various roles and functions the RUSs might develop; this information was transmitted to the RUSs through training sessions and periodic revisions of project Guidelines as new findings emerged.

The minutes of the 1968 planning meeting (RUB, 1968b) reflect the widely variant opinions held on the roles of the RUS. At that time, Glaser outlined the subroles he would expect an RUS to play: catalyst, resource person, consultant, participant, gadfly, research analyst, broker, listener, and program specialist. He stressed that the RUS must assist the user to develop both skill and a sense of ease in the process of adopting an innovation. Rogers saw the RUS role as having a definite research aspect, since "he tries to assure better dissemination and utilization of research findings." Clark proposed the action-research model—need identification and clarification, development of hypotheses, and evaluation—as a good role for the RUS in his collaboration with state agency staff. Griffis felt that an important function of the RUS was to

> disseminate general ideas about innovation and try to create an atmosphere conscious of particular problems and conducive to change. These general ideas would have to do with characteristics of people, organizations, the communication process and innovations themselves, that hinder and promote change.

Dumas and Muthard saw these role expectations as too broad and unstructured to be performed effectively; they proposed a support system to carry out many of the tasks presumed in the role statements. A Resource Center would catalogue, store, and retrieve information; subcontractors would evaluate and adapt research findings into innovative packages "ready to go" in the field. For Dumas and Muthard, the support of a Resource Center was essential to allow the RUSs to spend the bulk of their time encouraging the agencies to adopt innovations and creating an atmosphere conducive to change. The majority of planning group members, however, favored a demonstration as unstructured as possible. Therefore, the following general statement concerning roles and functions was adopted:

> The RUS must evaluate and interpret research findings, formulate rationales for their use, and devise ways of putting them into practice. His role is to persuade people to adopt innovations coming from research and to help them adapt the findings of research for use in practical situations.

The first official statement of the role and function of the RUS was

promulgated in the 1968 project Guidelines: "His primary role will be to facilitate change by encouraging new practices based on effective research results." Below are several restatements of role expectations, in chronological order:

> The change agent's role is not merely to encourage agencies and practitioners to adopt innovations, but also to help adapt findings for use in practical situations and to create an atmosphere conducive to change [Engstrom, 1969].

> The intention is that the RUS . . . bring into being *a distinctive role having to do with change*. Insofar as change is occurring, there is need to direct it. Where it is not occurring but should be, there is need to stimulate innovation based on sound knowledge. And where current practice is sound and effective, there is need to identify, describe, and spread it, for this too can be innovative [SRS Guidelines, 1970].

> The role of the RUS is to promote the use of research results or other knowledge to improve practice, programs, or administration . . . [and to create] . . . an understanding of the role, the expertise it has to offer, and the good effects it can have on practice, programs, and agency [RUS Self-Rating Scale, 1971].

The SRS role expectation, then, was that the RUS would assume many subroles to bring about change using the information from SRS-sponsored research and other pertinent knowledge sources.

Expectations concerning functions underwent considerably more evolution toward specificity during the demonstration, especially as evaluation efforts moved forward. The 1968 Guidelines outlined three main functions: 1) bringing research results to the attention of administrators and practitioners, 2) calling urgent practitioner needs to the attention of administrators and researchers, and 3) employing a variety of utilization strategies. By mid-1970 SRS began placing emphasis on the initiation of RU subprojects by each RUS and on the assessment of needs. To bolster the requirement concerning needs assessment (or need sensing), the original specification that the RUSs would not work with individual counselors was modified. The RUSs were advised that although they would not work intensively with individual counselors, they would make sufficient informal contact to assess needs and should consider working with counselors in groups. The 1970 revision of the Guidelines outlined the following RUS functions: assessing needs; communicating needs to administrators, practitioners, and researchers; developing strategies for meeting needs; and creating a climate conducive to change, a willingness to use available resources and knowledge, and a capacity for ongoing self renewal.

RUS functions were further specified in the *RUS Self-Rating Scale*, promulgated by SRS in 1971. Among other things, the RUSs were to rate their effectiveness in 1) mobilization and dissemination of information resources, 2) planning, 3) leadership, 4) need sensing, 5) establishment and use of a network of communication with information resources outside the agency, 6) use of an RU Advisory Committee, 7) development of a distinctive RU role, and 8) development and implementation of innovative approaches.

## DEVELOPMENT OF THE ROLE

Within the broad context of "change agentry," the RUSs were free to develop a workable role. In addition to the SRS Guidelines, some guidance in role development was provided in the information on research utilization models presented to the RUSs at training sessions. The three models stressed to the RUSs were those which Havelock (1971) developed from a review of the literature: the Problem-Solver Model; the Research, Development and Diffusion Model (R,D&D); and the Social Interaction Model.

The Problem-Solver model is, in essence, a need-reduction cycle, emphasizing collaboration with the client system and diagnosis of the system's needs. Havelock outlines the cycle in five stages (presented later on in an example of the use of this model), with the final stage leading "to a reduction of the original need *if* the solution is right."

The R,D&D model is not directly concerned with client system needs. In this model, basic research is undertaken with the sole goal of producing new knowledge. Before this knowledge can be used by a client system "an extensive process of development" is necessary; the final outcome of this development process is a pre-tested package ready for dissemination. Havelock caricatures this model: "If the knowledge is there, a user will be found for it."

The Social Interaction model is primarily concerned with the mechanisms governing the diffusion of knowledge. Major focal points are channels of communication and organizational and personal barriers to receiving a message.

The Massachusetts RUS discusses the differences in these three models in his final report. His choice of the Problem-Solver model as the most useful to the RUS role is based on the implications in

the use of the term 'client' for the receiver of the information, a term connot-

ing a special relationship of specialist and consumer, continuing over time and personal in its application of particular services to special user's needs.

Tully contrasts the use of the term 'client' in this model with the term 'target population,' which is used in the R,D&D and Social Interaction models. He sees the latter "preoccupied with the activities of the sender" and relying "on the massiveness of the dissemination rather than the selective collaboration of a change agent for successful utilization." He further focuses on the major drawback of the R,D&D model:

> Members of the research team almost never are used as participants with practitioners in the application of research findings or as collaborators in the manner of the RUS who characteristically 'enlists for the duration' from the point of need awareness through the stages . . . [of the Havelock model] . . . to stabilization of a satisfactory solution and generalization of this solution to the entire organization.

He also notes a difference in final outcome among the models. After participating in the introduction of an innovation with an RUS operating on the Problem-Solver model, the practitioner is left with "a heightened capacity to deal successfully with change, instead of being . . . dependent upon a corps of specialists upon whom [he] must call every time [he faces] a complex problem of change."

Like Tully, most of the RUSs conceptualized their roles and functions in terms of the Problem-Solver model. Scott (Texas) traces his efforts to assist the state's facilities in terms of the steps in that process:

> *Felt Need*
>
> The need for facilities to upgrade their programs has long been recognized by both Commission personnel and employees of rehabilitation facilities.
>
> *Need Articulated as a Problem*
>
> These needs were further clarified during on-site surveys made by the Facilities Section and through requests for assistance made by facilities' staffs. Technical assistance consultation reports provided another source of problem diagnosis. After reading these findings, . . . the RUS . . . could discuss the needs either with the facilities' staffs or with the Facilities Specialists.
>
> *Search for Solutions*
>
> A large amount of material on the subject was collected and reviewed. The assistance of the Materials Development Center (MDC), University of Wisconsin-Stout, was sought. This assembled information was filed in a retrievable manner.

*Choice of Solution*

Available materials were then reviewed to identify possible sources of assistance to fill the requests for aid. For example, if the problem concerned client behavior problems in the work adjustment program, information on behavior modification was screened to assist the facility in developing a better program.

*Application of the Solution*

Next, relevant ideas were formulated into plans. Sometimes a specific course of action was suggested. At other times, several possibilities were recommended (such as modeling, a token economy, etc.) as approaches to behavior modification.

*Reduction of Need or Seek New Solution*

The plan of action chosen by the facility was put into practice, and contact was maintained by the Facilities Specialist. Through these efforts, several facilities were aided in the initial planning of their program before the facilities were actually established. Also, several facilities used the information gathered to develop in-service training programs. Some facilities corrected program deficiencies through use of the information which enabled them to meet requirements of the 'Standards for Rehabilitation Facilities' (of the Committee on the Accreditation of Rehabilitation Facilities).

The New Jersey RUS also worked within the Problem-Solver model, finding it easy to understand and adapt because of his previous training as a rehabilitation counselor:

> The rehabilitation process taught in graduate school and practiced as a counselor closely approximated the . . . Problem Solver Model. . . . The rehabilitation process can be characterized as moving from a problem (handicapped client) through a variety of steps (diagnosis, treatment, etc.) eventually to a solution of the problem (rehabilitation closure). So the transfer of knowledge and skills was relatively easy and should be for practitioners in roles similar to a rehabilitation counselor.

Marinelli practiced what he calls a "hybrid" Problem-Solver model with the following steps:

1. Determining an area of need. Concurrent with this step, relationships were developed with persons concerned with the problem.

2. Problem diagnosis or getting a clear idea of what the problem fully is. This step usually involved getting together with appropriate Agency staff to discuss the problem in detail and to move from a general diagnosis to precise indicators of the problem.

3. Developing solutions to correcting the problem. Again, interested and concerned persons were involved in the solution building.

4. Implementing the solution. This is usually done on a pilot demonstration basis before broader implementation. If the results of the pilot were positive, broader implementation was considered.

5. Stabilizing the innovation. This included whatever support was needed to have the innovation adopted as a regular part of the program.

An example of Marinelli's "hybrid" model in action follows:

The introduction of the New Careers Program was a gradual promotion dating back to the first meeting of the Research Utilization Advisory Committee during the first year of the Project. It was proposed by the Committee that this area be studied to determine what steps should be taken by the . . . Agency. The RUS was asked by the Committee to undertake a thorough study of the . . . Agency's position and attitude with regard to the use of paraprofessionals and to obtain knowledge from other programs which could be of assistance. Following meetings with personnel from various levels and geographic areas, a paper was developed presenting: (1) the arguments which had been voiced for and against the use of support personnel; (2) a review of studies on the use of aides throughout the country; (3) an examination of the State Agency's previous experience with support personnel; (4) alternative approaches based upon the findings.

With modification, the paper was given the Committee's blessing, and it was recommended that the State Agency explore the possibility of increasing the role of paraprofessionals. After receiving administrative support, the RUS developed and submitted a proposal for a New Careers in Rehabilitation Program to the Social and Rehabilitation Service. It called for setting up 26 entry level positions leading to careers in rehabilitation counseling.

As soon as funding was obtained, a coordinator was assigned to carry out the advocacy role of the program. The RUS provided the training . . . of the coordinator who gradually assumed the full responsibility for the program over the course of the next two years.

The New Careers Project progressed well beyond the plans forecasted. All 26 New Career positions were filled. Training of all persons (supervisors, rehabilitation counselors, and new careerists) involved in the program was carried out and is continuing. All of the new careerists were enrolled in college programs.

Marinelli's model differs from Scott's in two respects: his technique for implementing the solution and his personal involvement in stabilizing the innovation. It further illustrates, as Marinelli notes, that there is considerable overlap and vacillation between the steps. In Scott's Facilities example, evaluation and synthesis of available information were sufficient before transmission. In the case of Marinelli's New Careers Program, the information first had to be packaged for agency administrators and then repackaged for the target audience. In addition,

the solution Scott chose was dissemination; for Marinelli it was a demonstration project. In many respects, the solution chosen defines the type of role the RUS has found most workable in his setting; in the cases presented, Marinelli acted as a consultant stimulating activity, while Scott acted as a facilitator of information dissemination.

The entire R,D&D model—basic research, development, testing, packaging, mass production, mass dissemination—was not used by the RUSs to any great extent, since none of them saw his basic role as pure research. The dissemination aspect of the model was, however, evident in many RUS activities. Bassett of Virginia used the R,D&D model for mass dissemination via the newsletter. He adds that this model is "the most difficult for obtaining feedback." In other words, the assumption that "if knowledge is there, a user will be found for it," may be valid, but the sender will often have no confirmation of adoption.

Bassett followed the R,D&D model in a demonstration project to introduce the use of behavior modification techniques at a state rehabilitation center. Since Center staff had not expressed a need for behavior modification techniques, Bassett was banking on his intuition that the inherent "goodness" of the innovative package would gain acceptance. He was fully aware of the weakness of the R,D&D model for an RUS role:

> The search, location, and choice of helpful research results which suggest solutions does not guarantee that the material will be utilized. The consumer must first be convinced that the material chosen is applicable to his need.

Bassett notes that the innovation was adopted and stabilized primarily because a felt need, although unexpressed, did exist.

Only one RUS, Jacobs of Alabama, relied primarily on the Social Interaction model, although RUSs used this model many times when they sought acceptance for a planned innovation from agency opinion leaders. Jacobs notes that this model, which focuses heavily on techniques and channels of communication, was most suitable for his role because

> [I] know the staff and some of their interest levels with their strong points and weak points. The organizational structure and supervisory levels . . . also made this type of model suitable.

Jacobs was an opinion leader and key decision-maker in his agency; he chose to work from his position of strength and influence to use already developed communication channels to influence agency staff. He was

also primarily interested in information dissemination, a major focus of the Social Interaction model.

Scott suggests a possible reason that more RUSs did not use the Social Interaction model:

> It is not as product-oriented as the other methods. Instead, it stresses the change process. That . . . model would consume too much time under current program guidelines. . . . It is important that any . . . RU . . . program be perceived as useful by agency administrators. This usually means that they must see results in meeting agency needs. They are not as interested in how the results are achieved.

## THE ROLES ASSUMED

The RUSs were charged with being "linkers" and change agents, and each faced the problem of selecting the role or roles which would accomplish the goal of linking research with practitioners toward improvement in agency operations. Several of the RUSs have noted that the roles and functions stressed by SRS changed during the first year of the project. Buchanan (Missouri) uncovers what was, perhaps, an inherent problem:

> Inasmuch as the role of the research utilization specialist in the agency was to be a developing role, it was difficult to visualize just what his activities should be in relation to the ongoing activities of the organization. Should he act as a consultant and wait for problems to be presented? Should he be assigned an active role in some ongoing activity already present in the agency? Would he set up a library service and function primarily as a librarian? In the beginning, the trend seemed to indicate that the RUS would be a type of information dispensing agent and be primarily involved in library service activities.

Tully (Massachusetts) supports him:

> By the end of the first year, however, it became clear that this narrow function [information dissemination] failed to meet the goal of effectively introducing research results into agency practice. It was realized that the guidelines would have to be revised to reflect the intent of working toward a broader based job function with a more dynamic role for the research utilization specialist.

Through all the uncertainty of role expectations, the role most useful to the majority of the RUSs was that of *consultant* or *catalyst*:

> Stimulating . . . activity . . . and seeing . . . [it] carried out, constituted the most important part of the RUS role. This role was principally that of a consultant to all levels of personnel in assisting them to integrate the most current knowledge in response to Agency needs [Marinelli, New Jersey].

> Usually the RUS assumes a consultative type of orientation. This involves the selling of a new idea or technique by explaining the idea, how it might be used, potential benefits to be derived and obtaining a commitment from the prospective user to utilize the idea or technique [Scott, Texas].

> I believe I would have greater impact upon improving the service-delivery system, if I were allowed to participate as a consultant on the change process with practitioners in the mobilization of available resources in planning and conducting short term innovation projects. Such a consultant function concerned with the implementation of promising new programs would, I believe, enable the RUS to perform in the action-oriented role more relevant to practitioners' needs and agency's goals [Tully, Massachusetts].

Bassett points up a source of conflict in the consultant role:

> From my standpoint and position assignment, I found a 'catalytic' type role most conducive in view of existing Department philosophy. I would not be anxious to change this role under the circumstances; although when one becomes a 'catalyst' rather than a 'doer,' an agency administrator often wonders if the 'catalyst' is doing anything worthwhile when actually he may be directly responsible for more changes and improvements in operational procedures than he receives credit for.

One aspect of the catalyst role sought to develop the "user as linker":

> I believe the most valuable function of the RUS is to develop in practitioners an understanding of how to apply knowledge in their work and the fostering of confidence in themselves to cope with 'future shock' [Tully, Massachusetts].

The belief that, in the end, research utilization must be a capacity within each member of the system rather than a series of roles assumed by one person is also held by Gant: "Research utilization should be a concept that permeates the agency rather than one which is managed by a single individual."

The *information dissemination role* was seen as important, but most felt that the librarian-type tasks of the role should be assumed by a person assisting the RUS:

> The organization, storage, and retrieval function . . . is probably much more important than . . . anticipated. [The] first step in utilization of knowledge is its retrieval. [However] . . . the effectiveness of the RUS is seriously impaired if he becomes too involved in such operations himself [Schlamp, California].

> A minor but important role . . . was . . . facilitating the dissemination of knowledge. Information selection, dissemination, and retrieval made a significant contribution to the overall research utilization effort by keeping practitioners aware of the latest developments, and it was this knowledge that

> stimulated self-inquiry. . . . The more that information dissemination is carried out by a library-like service in the Agency, the less the RUS has to be involved in this function [Marinelli, New Jersey].

However, information dissemination was perceived as the primary role of the Massachusetts RUS by agency staff, even though he saw himself mainly in the role of consultant:

> The current status of the position is that of a resource person whose chief function is perceived by many as the gathering and dissemination of research findings of rehabilitation knowledge for practitioners, administrators, select groups such as task forces, committees, and the staffs of certain divisions. . . . This prevailing image was temporarily replaced for the duration of the placement innovation . . . when a more dynamic leadership and coordination function was allowed.

Havelock defined another RUS role, the *training role*, as the ability "to transfer by instilling in the user an understanding of an entire area of knowledge or practice." This role was not widespread among the RUSs, although several feel that the RUS must be linked to agency staff development operations to function effectively. Buchanan was the only RUS who functioned completely within the training role. Although he was extremely effective as a trainer, he was not able to interject the flavor of a "change agent" into his training activities and SRS monitors halted the project after its fourth year since no real research utilization role was developing. Schlamp notes that of all the Havelock roles—"dissemination, implementation, planning, leadership, outreach, mobilization, awareness of needs, and training"—only training was not a significant part of California RUS activity. Bassett early divested himself of responsibility for training operations and is satisfied that he did so.

The adoption of training as the primary RUS role is a signal that true RU functions are not operating. Further, if this role has been mandated by agency management, the RUS function is being subverted. Trouble-shooting is another role that should not take the primary position. In California, for example, "the Research Utilization Specialist was often used as an experienced, well-rounded, knowledgeable, conscientious, dedicated trouble-shooter." Schlamp found it was easy for the California RUSs to become involved in trouble-shooting activities because "each . . . possessed the characteristics of dedication, skill, knowledge, experience, and education to carry out trouble-shooting duties as few others could have done." In essence, the RUS was diverted from the long-range goal of facilitating change and was "used" to carry out the short-term goal of fighting fires, which is related to reestablishing the

status quo and therefore diametrically opposite the purposes of a research utilization program.

Although most of the RUSs' final reports make little direct mention of the *leadership role*, those placed in positions of authority within their agencies (Jacobs and Marinelli, for example) undoubtedly accomplished many RU goals by assuming this role. According to Havelock the leadership role should "effect linkage through power or influence in one's own group, . . . [or] transfer by example or direction." Tully, low in the agency hierarchy (a senior counselor), used leadership in the latter sense:

> It has been my experience that the RUS generates cooperation . . . [by displaying] leadership through example rather than by precept or by pre-empting the authority or responsibility of those whom he seeks to assist.

In the end, all roles were defined to ensure that the RUS was viewed as a helping person:

> The importance of becoming recognized as a helping person cannot be overemphasized. It can spell the difference between an effective research utilization system and a mediocre one [Bassett, Virginia].

## JOB TITLE

The RUSs were unanimous in the belief that the title Research Utilization Specialist detracted from their acceptance and effectiveness and was not, in fact, appropriate to the position. The word 'research' was a source of considerable resistance. The California RUS describes why:

> Research, in this context, bears an awesome significance to the field who see it as a combination of evaluation (threatening), esoteric (inapplicable), detailed (hard to understand) and time consuming (extra work).

Tully found that Massachusetts field staff reacted vehemently to the perception of research as evaluative. He reports that many thought cooperation with the RUS would result in "damaging reports about local matters, including some loss of control over staff by office managers." In fact, some key Massachusetts agency personnel opposed the creation of an RUS position on the grounds that it would "open a Pandora's Box."

Bassett found that the term 'research' created not only resistance, but also misunderstanding of the job function:

> Because [of] . . . the . . . image many practitioners associate with the word 'research,' the RUS would often have to explain that the mission of the Virginia RUS project was not to do basic research, but rather to assimilate, synthesize, and work with practitioners in implementing research findings which offered assistance in solving practical day-to-day problems.

Tully points out that the term 'research' actually does not apply to the position, since the knowledge base of the change agent must in fact be much broader:

> The kind of rehabilitation information most valued and utilized by agency staff is that dealing with successful programs and techniques found in other VR and social agencies. The highly specialized research projects . . . are of more limited interest and application to the average practitioner.

The title 'specialist' was an equal handicap. It is interesting that during initial planning meetings, Glaser objected to hiring an RUS with a doctorate specifically because he might be perceived as a specialist rather than a helping person. Although educational qualifications were set accordingly, the word 'specialist' became part of the job title.

Schlamp found the word 'specialist' even more damaging than the word 'research.' In California, the RUS was sometimes perceived as a person with detailed specific knowledge about one subject, at times as "a person who knows more and more about less and less." Consequently, the RUSs were in a poor position to provide consultation, since a specialist "cannot possibly know what is really going on." Jacobs says: "I . . . think we could eliminate being tagged 'change agents' or 'specialists' which we certainly were not."

Scott perhaps is most exact in stating that personnel who had no direct contact with the RUS "found it difficult to analyze the title and reduce the verbiage to a definition of a helpful person." The chosen title of Research Utilization Specialist in no way connoted a helping person to agency personnel; yet this was the very image the RUSs hoped to present and needed to foster for success. Scott devised a short explanation of his role to help in this: "Try to think of it as Field Information Services—everything you've always wanted to know about rehabilitation, but didn't know where to ask." He found this explanation successful, stating that it never failed to produce the response "Oh, so that's it!"

In suggesting a new title for the position, the RUSs have stayed completely away from the usual terms employed, such as Research Utilization Specialist, change agent, and linker. Instead, they favor changing the word 'research' to 'knowledge' or 'information.' Bassett of

Virginia notes that during the second year of the project his state director said, "You should not be called a Research Utilization person. You should be called an Information Utilization man." Schlamp thinks that of the two "information does not seem as condescending. . . . Most practitioners feel they have knowledge of their field already, but they are always eager to receive more information."

A substitute for the word specialist is less easily reached, requiring a compromise between a position which appears too lowly, and subsequently results in the incumbent's being ignored or passed by, and a position which appears so powerful or incomprehensible that it evokes fear and avoidance. The Alabama RUS suggests supervisor, officer, or coordinator. The Wisconsin RUS believes it is a "mistake to give a lot of visibility to such terms as research utilization, information dissemination, change agent." Instead, the position should be called, and function as, an agency Program Specialist.

Below are some further RUS suggestions for a new job title:

Knowledge Utilization Specialist

Supervisor of Research Utilization

Supervisor of Rehabilitation Literature

Information Utilization Specialist

Assistant to the Director for Information Utilization

Assistant to the Director for Knowledge Utilization

Planning Assistant—Utilization

Assistant in Information Utilization

Departmental Information Advisor

Information Utilization Consultant

## ROLE CONFLICT

*It would be expected that some RUS[s] would model their role on researchers and find [their] professional home among them. Others would tend to . . . adapt their roles from counseling and administration. The high level of*

*anxiety which was apparent at the first training session could be seen as an indication of these multiple pressures. It is interesting . . . that although anxiety was expected . . . the level far exceeded the expectation* [Clark, 1969].

SRS research utilization and training staff and their specialist consultants expected a certain amount of conflict in the developing RUS role, both within each individual as he sought to find the most effective yet comfortable role and between each RUS and agency administrators and supervisors. They were unprepared, however, for both the direction and the intensity of the role conflict that occurred.

During the 1968 planning meeting, the potential for conflict between the RUS in his role as "administrator with a certain amount of power and . . . as a sympathetic and helpful listener and conveyor of information" was discussed. The solution suggested was to "view the RUS as a 'power behind or beside the throne' who is so knowledgeable about the needs and available resources in the field . . . that he can be ignored by directors, supervisors, or counselors only at their own peril." In retrospect, this view overlooked the difficulty of establishing and maintaining an RUS or any new role in a state social service agency. Most of the RUSs confronted the more basic problem of establishing a base from which to operate and some coherent control over the role they were expected to play. Schlamp gives perhaps the most graphic RUS description of the intensity of conflict experienced by several:

> If one stands very far back, the RUS model in California was one of the problem solver. . . . [However, at close] range this model dissolves into a cacophony of activity not uncolored by self-survival techniques.

Although most managed to surmount the "cacophony" and several reached well-defined and well-accepted roles within the agency, all were subject to the insecurity of the early years of the demonstration. Two were direct casualties of role conflict with the agency power structure; several found their RUS roles encroached upon by the assignment of non-RU duties, and one found the RUS role inconsistent with his personal style of operation.

The first Texas RUS, Anne Kohler, operated for three years in a role which was acceptable to her immediate supervisor but not, it now appears, to top agency administrators. With the support of SRS monitors, she targeted many of her RU activities to regional and national audiences, rather than focusing entirely on serving the needs of the Texas agency. When her supervisor was replaced during a change in agency administration, she was immediately dismissed from her post as

RUS. Her replacement (Randall Scott) and his supervisor refocused RUS activities to emphasize in-state and deemphasize regional and national efforts. Scott served with the full support and confidence of top administrative personnel. Although some of Kohler's work as RUS survives, excellent products such as audiovisual presentations geared to national and regional audiences were withdrawn from use within the agency.

Buchanan of Missouri was another casualty of role conflict. In discussing the constraints which hindered him from developing an RU role, he emphasizes the dissatisfaction within his agency with the initial ambiguity of the RUS role and functions:

> Unless the new position is fully explained to . . . and accepted by the organization, it is difficult to integrate new activities into ongoing functions. . . . This concept made it extremely difficult to establish a useful function for the RUS. . . . It seemed to ignore strengths already present in the organization and functions which were being handled capably by staff members responsible for those activities. In the type of an organization which is present in most Vocational Rehabilitation agencies, it did not seem possible or permissible to have a person such as an RUS 'free wheeling' throughout the organization.

He adds that the lack of a job description meant that "a person holding such a position would find it difficult to be an 'in' person and not an isolate." In Missouri the definition of the RUS role became a central issue at the outset of the demonstration and was resolved by the assignment of the in-service training role to the RUS. As noted earlier, the final result was the discontinuation of the project by SRS monitors after four years.

All three California RUSs suffered role conflict as a result of the assignment of non-research utilization duties:

> When the functions and duties of a newly established position are ambiguous, it is inevitable that the time of the person filling that position will be gradually encroached upon by many of those in authority. The RUS position was no exception.

For example:

> In the latter part of Dr. Allen's tenure . . . he was assigned the job of obtaining all the research information available on the rehabilitation of welfare recipients. This was a legitimate and useful RUS service. . . . However, it was an easy step to ask him to oversee the newly developed program. . . . Gradually the work of overseeing this initial utilization project took more and more of his time. When the welfare program was assigned a full-time project director, Dr. Allen was assigned this job [and resigned his position as RUS].

In Wisconsin the role of RUS was not consistent with the personal style of the man selected for the job. Sather viewed himself as a program specialist and was uncomfortable with the looser definition of the RUS as consultant or facilitator. He chafed under many RUS tasks which he felt unsuited to his talents and experience, and his preferences sometimes caused poor working relationships with agency personnel who perceived the RUS role in an entirely different light. Sather resolved the conflict by asserting that each program specialist had RU responsibilities for his own area, and he operated as a program specialist in alcoholism. (He now believes that research utilization goals should, in fact, be part of each agency's program specialist role.) EGA evaluators note that: "It is to the RUS's credit that his knowledgeability, resourcefulness and ambition permitted him to enjoy some success in pursuing RU goals despite these interpersonal problems."

In retrospect, each RUS took on the role which best fit his self-image and the reality of the situation within his agency; those whose agencies accepted these roles succeeded, those who came into conflict with agency expectations experienced continued difficulty. However, all who used research utilization techniques and pursued research utilization goals, whatever their particular role, succeeded to some extent in introducing innovations based on research or other best practice knowledge.

EGA evaluators (Glaser & Backer, 1974a) speak of the effect of the imposed search for role definition on the course of the demonstrations:

> Because most RUSs had relatively little training in the principles of effective knowledge transfer prior to coming into the project, and because state VR agency climates often were not particularly receptive to what the RUSs were trying to do, the lack of a more structured definition of RUS priorities and procedures when the projects were initiated by SRS probably hindered their early operation. RUSs floundered about, trying to find useful activities to undertake and effective means of carrying them out. This hit or miss procedure sometimes resulted in unproductive work, or in the diversion of RUS efforts to non-RU priorities.

However, the reader must remember that SRS planners and consultants wanted a "developing" role and deliberately adopted a loose role definition to see what might develop. Glaser believes that a solution to the problem might have been closer SRS liaison and monitoring of each project, including frequent site visits, if SRS had had sufficient staff to devote to such a function.

Schlamp believes that the driving force behind the various roles developed was less a desire to meet SRS guidelines and RU models than

a need to resolve the intense anxiety of the earlier unstructured situation. Each RUS shaped his role to the unique environment of his agency, based as much as possible on the research utilization criteria set forth in federal guidelines and training sessions. In many ways, this is a most successful outcome of the demonstration projects. In addition to identifying myriad possible pitfalls and conflicts, the RUSs have developed viable RU roles and functions unique to nine different agency settings. Although not all became skilled facilitators or consultants, most nonetheless managed to spark agency interest in the use of new knowledge, disseminate a large amount of information, and develop channels for sensing field needs. Further, the roles and functions developed by the RUSs gave the change agent role flexibility, an important ingredient if such a program is ever to be adapted to the general and blind program VR agencies across the country.

Buchanan speaks for all the RUSs in emphasizing the necessity of a pre-defined role:

> The research utilization specialist . . . must have his role and function in the organizational structure adequately described in order to have a setting conducive to knowledge utilization. Without such conditioning, the effectiveness of research utilization is limited.

## THE MODEL JOB DESCRIPTIONS

> *The adoption of a specific position recognizes the need for a focal point for a knowledge utilization effort. . . . It does not imply that knowledge utilization should be the responsibility of a single individual but that the support, creation and maintenance of attitudes, mechanisms and processes that cause knowledge utilization should be an agency-wide concern* [Tully, Massachusetts].

The preceding discussion concerned the roles practiced during the demonstration period. In summarizing his experiences, each RUS also prepared a model job description for the RUS position in his state agency—his ideal for the RUS role. EGA evaluators have synthesized these nine statements into a summary position description for an RUS in a state VR agency. This overall model is presented in the *RUS Guidelines* (Glaser & Backer, 1974e); it includes 1) a general statement of work responsibility, 2) how to position the RUS in the organization, 3) qualifications (including required knowledge, skills, and abilities), and 4) fifteen statements concerning job functions. Following is EGA's list of job functions for an RUS:

Directs and coordinates a program of research utilization activities with emphasis on participation by both central office and field staff.

Establishes and maintains good avenues of communication within own agency and with related agencies, organizations, institutions, etc. Works in conjunction with statewide VR agency administrators in the identification of problems and development of solutions to them. Maintains contacts with various research oriented institutions, including major universities in the state, in order to facilitate current access to new knowledge.

Designs formal or informal surveys to determine program needs, problems, attitudes about knowledge application, and so forth for use in guidance of the research utilization program.

Collects, evaluates, packages, and distributes to agency staff material concerning research findings, validated practices tried out in other organizations, and related knowledge that may be helpful in meeting agency developmental needs.

Represents the state VR agency at national, regional, state and other meetings concerning the subject of research utilization.

Works closely with agency research staff to define needed research studies and to develop means of applying significant findings that emerge from any research conducted by the VR agency.

Initiates and conducts special innovation projects designed to introduce important bodies of new knowledge to the agency in the interest of improving program operation. Works creatively with other agency staff to develop the capability to carry through these projects without heavy participation by the Research Utilization Specialist, thus freeing him to continue unique dissemination, consultation, and innovation facilitation efforts characteristic of his program.

Initiates and coordinates systematic evaluations of demonstration projects, in the interest of assessing their worth for the information of agency decision-makers. Again, works to recruit assistants from elsewhere in the agency to carry through these evaluation efforts, in order not to divert major amounts of Research Utilization Specialist resources to evaluation per se.

Develops innovative means of distributing new knowledge within the agency, particularly that emerging from research studies. Maintains written communication links, such as a newsletter or bulletin, as needed.

Responds to requests for information coming in from agency staff, from students in rehabilitation training programs, and related persons within the state.

Plans, organizes, and conducts conferences, workshops, seminars, and miscellaneous training programs concerned with the identification and application of relevant new knowledge in meeting needs for improvement within the agency.

Plans for and establishes a central information center or centers consistent with information needs of the agency and supervises the activities of this center. Develops this resource as part of, or in close coordination with, the agency library.

Prepares a budget essential to the program, and maintains control of expenditures as approved and relating to the research utilization program.

Supervises and directs the work of professional and clerical staff essential to the research utilization program.

Provides consultation to the agency director, administrative staff, and field staff concerning problems and the needs to which the application of new knowledge may be addressed.

All of these functions are contained in most of the individual job descriptions. However, none include extensive translation and transformation of research results, although Tully (Massachusetts) describes a "complex dissemination" activity including review, evaluation, and synthesis of information. Translation and transformation go beyond packaging (as in a newsletter, annotated bibliography, or literature review) to create a product designed for immediate use in daily operations. The necessity for translating and transforming innovative findings is firmly established as a principle of good knowledge utilization practice. Yet project findings suggest that it may be unrealistic to expect an essentially one-man operation to undertake extensive translation and transformation activities. Project reports indicate that the RUSs preferred using already developed products. Those who initiated the translation and transformation of findings to create a new product usually relied on the original researcher or other specialists in the field.

Gant of Utah and Sather of Wisconsin stand apart from their colleagues in their view of the RUS role. Sather believes that the RUS role should be a part of the program specialist's job: each program specialist would serve "as a consultant and resource person to staff, diagnosing problems and assisting in the selection of appropriate solutions" in his individual specialty areas. He proposes two program information specialist positions to provide support for this type of RU system in the Wisconsin agency. One information specialist would be a professional responsible for library organization, information collection, and cataloguing; the other would be a clerical person in charge of general library operations.

Gant also believes that the RUS function within the state agency could best be performed by a program specialist, specifically a specialist for program development, but he would prefer to see one RUS serve the

entire VR agency network from the federal level. This RUS would be a staff assistant in a federal office, focusing on the immediate concerns of VR agency directors across the country by identifying research findings and conveying them to federal policy makers. In this way, Cant believes that new and promising research findings would be incorporated into federal program directives which would then reflect "implications of new learning on current practice."

The interested reader is referred to the individual final reports for the complete job descriptions prepared by each RUS. The Texas report also includes a model job description for an Assistant RUS, and Texas, Wisconsin, Virginia, and several others include descriptions of a librarian or information specialist position.

For many of the RUSs, their ideal role proved workable or within reach. Schlamp notes how far removed the social service RUS role, which relies so heavily on personal interaction, is from the original role model of the Agricultural County Extension Agent:

> The . . . farmer . . . working for personal profit in a competitive society could hardly be considered a direct and satisfying analogy to the . . . Rehabilitation Counselor . . . working for the good of humanity dealing with human beings in a complex social structure.

Probably none of the 17 persons who served as RUS would advocate the adoption of a single, rigid job description, but each would instead agree with Scott of Texas: "Above all, the Research Utilization Specialist must remain responsive to the needs of the agency and this requires role flexibility."

## PERFORMANCE STANDARDS

Performance standards used within the nine demonstration states were individually determined. Overall performance assessment was generally a matter between the RUS and his immediate supervisor. In California, Alabama, Utah, and Missouri criteria for evaluation of the RUS *as an RUS* were never established. The Alabama RUS found it difficult to establish clear objectives for an experimental activity; the Utah RUS was judged on the state civil service rating scale elements of "performance, interaction with other personnel, ability to supervise and to act independently"; and the third California RUS found no formal records of performance standards used. The Missouri RUS was judged on his performance of the in-service training role.

In Texas, New Jersey, and Massachusetts, however, the RUSs worked closely with their supervisors to develop performance standards. The Texas RUS supervisor relied mainly on reports received directly from field staff or via other central office personnel. In addition, the RUS prepared monthly reports on RU and library activity. In Massachusetts, the search for standards involved a review of all available information—materials from RUS training sessions, SRS issuances, writings of RU authorities, and the advice of an RU consultant and the Regional VR Commissioner. Tully and his supervisor found that, even after this extensive effort, the information they uncovered was valuable mainly for "guidance in grasping the intent [of the demonstration]." Unlike the Texas agency where assessment was informal, the New Jersey RUS worked within the standard agency framework of establishing objectives for a specified period of time and measuring outcomes against those objectives. He also prepared monthly progress reports for his immediate supervisor.

Self evaluation was used extensively by all the RUSs. The Massachusetts RUS sometimes made telephone surveys or asked those attending conferences or committee meetings to document program impact. Tully found that the RUS must actively solicit feedback, since staff rarely take the time to volunteer their comments. The Virginia RUS Librarian obtained feedback by attaching a short questionnaire to documents circulated from the agency library. All the RUSs relied heavily on informal feedback for evaluation.

In 1971 SRS staff and the RUSs developed an *RUS Rating Scale* to be used by the SRS Research Utilization Advisory Committee in evaluating yearly RUS progress reports. Each of the 12 scale items is rated on a five point interval scale. Scale items are

Mobilization and dissemination of RU materials

Specific research findings or knowledge used

Results attained by using knowledge or research results

Plans for future RU activities

Leadership exhibited by RUS

Response to RUS leadership

Steps taken to determine needs as a basis for RU activities

Extent of relevant collaboration beyond his own agency

Completeness and clarity of Progress Report

Effective use of RU Advisory Committee

Development of a distinctive RU role

Other RU activities or innovative approaches not covered by any of the scales above.

In addition to the performance standards contained in the RUS Rating Scale, EGA evaluators independently developed a rating scale covering eight roles and functions: dissemination, implementation, planning, leadership, outreach, mobilization of resources, awareness of needs, and training (summarized by the acronym DIPLOMAT). Both rating scales are contained in EGA's *RUS Guidelines*.

In their project final reports, the RUSs outlined what they considered the earmarks of a successful RUS. For Scott of Texas, the successful RUS is:

Familiar with the agency's structures, programs, and operations,

Knowledgeable about the field of rehabilitation,

Knowledgeable about research in rehabilitation and other related disciplines,

Able to work effectively with and through others,

Able to assimilate a large amount of information,

Able to communicate complex information in a clear, concise manner,

Open to new ideas, but maintains a practical perspective,

Familiar with many resources, and

Aware of the benefits of using research findings.

A high tolerance for frustration, a willingness to pursue RU goals despite obstacles, and a genuine concern for program improvement were the components of Sather's (Wisconsin) definition of the successful RUS. This RUS must also be comfortable and effective with all staff and able to view things from their perspective, having genuine interest in their opinions even if not always in agreement. Finally, the successful RUS would enjoy a reputation with his colleagues as someone "very knowledgeable about vocational rehabilitation, practical and down-to-

earth and able to offer assistance in g[illegible] job done rather than merely being able to discuss a probl[illegible]coos of Alabama stresses the importance of attitude:

> The behavior of the RUS should reflect a genuine concern for individual and professional growth, a complete willingness to accept field questions and get replies as quickly as possible. . . . A positive attitude reflecting interest and concern would be essential. . . . He must be a personable individual who can readily establish communication with staff at all levels and be one that can encourage, probe, push, and otherwise get results, without building a degree of resentfulness toward him.

Tully's successful RUS has a desire to serve:

> The colleagues of the RUS characterize him chiefly as a person who has a very strong desire to serve disabled clients by serving the practitioners who work most closely with them, one who seeks to provide quality service by makin the best use of available resources of knowledge, personnel and equipment within the agency and rehabilitation community.

EGA's *RUS Guidelines* also contain a section on the evaluation of an RUS program, including the techniques and merits of self-evaluation, evaluation by those actually conducting an RUS-introduced demonstration, use of an outside consultant, and evaluation by an agency research or program evaluation unit. The *Guidelines* further caution that, although systematic evaluation of major RUS activities is crucial, the RUS should not spend an inordinate amount of time evaluating his own activities. Ideally, arrangements should be made to have such evaluations conducted by some other unit in the VR agency.

Five general performance criteria emerge from the RUS final reports:

General acceptance of the RUS as an individual within the agency.

The number of requests for help or information.

The degree of field response to RUS surveys and inquiries.

The number of new programs initiated in the agency as a result of RUS activities.

Satisfactory progress toward specified RU goals, within an established time frame.

## SELECTION CRITERIA

The VRA Research Utilization Task Force originally recommended a master's degree and at least two years of rehabilitation-related work experience as the basic qualifications for an RUS. During the 1968 planning meeting the subject of RUS qualifications was discussed at length. Glaser agreed with the degree and experience requirement, and added "skill in critical thinking, research evaluation, and the dynamics of introducing change into an ongoing system" plus an understanding of organizational structure in general and state VR agency structure in particular. Rogers felt that the RUS should hold a Ph.D. in a social or behavioral science in addition to specialized training in communication and information diffusion. Glaser disagreed, noting that a Ph.D. might not be as successful in the linking role since he might be identified as "a specialist or expert rather than a helpful and sympathetic listener with ingenious, practical ideas," a view which was later confirmed by several RUSs.

The 1968 SRS Guidelines incorporated the requirements of a master's degree and two year's experience as a rehabilitation practitioner and suggested, in addition, a genuine interest in the improvement of rehabilitation practice through new knowledge and a "promotional-type" personality. Although not a requirement, the suggestion was made that an RUS's effectiveness might be enhanced if he was known and respected within the agency employing him. In November 1970 the Guidelines were redrafted. Five years of work experience, including two as a counselor, were required for the RUS holding a master's degree. However, a Ph.D. in psychology, management, or sociology (with a solid background in research methodology), was designated as preferable, in which case two years of work experience was sufficient. These new Guidelines stressed the importance of careful selection:

> It should be recognized that the RUS role calls for a *most unusual* combination of traits, education, and experience, and in selecting the person to fill the role, corresponding care should be exercised to ascertain that the candidate embodies them, for inservice training cannot create a good RUS from poor material.

The RUSs also were asked to propose selection criteria in their individual final reports. None felt that the Ph.D. was necessary, but most felt that a master's degree in a rehabilitation-related field should be required. They stressed work experience as a social services agency counselor (several added supervisor), the ability to work effectively with all types of people, a genuine concern for and commitment to VR

program improvement, and a practical, down-to-earth orientation to problem solving. Experience in working with groups, writing ability, graduate courses in management, a background in research methodology, and a knowledge of rehabilitation research resources were additional recommendations. In general, then, the selection criteria outlined in the SRS Guidelines were also espoused by the RUSs, with the exception of the Ph.D. requirement which most RUSs felt could be adequately replaced with solid practitioner work experience, and extensive knowledge of VR agency programs and operations. The RUSs further stressed a practical orientation, a point not noted in the SRS Guidelines.

The acronym STICK capsules Tully's view of the qualities necessary for an RUS:

S—Stamina: Must be mentally and physically energetic and enduring in fulfilling numerous requests for information, participating in task forces, workshops and individual face-to-face problem-solving discussions.

T—Tact: Requires a high degree of diplomatic skill and discretion to judge whether the situation requires action or waiting.

I—Intelligence: Needs creative but pragmatic intelligence to comprehend complexities, abstractions, psychological motivation, organizational climate, user receptivity, and appropriate timing.

C—Curiosity: Requires strong curiosity about novel but promising ideas, techniques or programs without losing orientation or feeling uncomfortable with strange or conflicting information.

K—Knowledge: Requires an extensive fund of professional and technical knowledge dealing with rehabilitation and allied fields if he is to possess the breadth of understanding and the perspective needed to be able to draw upon the resources of the many disciplines and scientific fields involved.

EGA evaluators also prepared a model RUS job description (Glaser & Backer, 1974e). They suggested graduate study, preferably in rehabilitation, with some course work in research methodology and statistics; experience as a counselor and supervisor in a rehabilitation setting; and skills in oral and written communication, in working with others, and in problem identification. In short, EGA felt a thorough working knowledge of the total rehabilitation process was essential to the role.

A final comment is in order at this point. The RUSs tended to recommend as selection criteria the educational and employment experience they themselves had. However, as Schlamp has pointed out, since it is not possible to compare the successes of this group with another group with dissimilar educational and employment backgrounds, it is premature to conclude that such experience is necessary to function effectively as an RUS in a VR agency setting.

# DISSEMINATION AND UTILIZATION STRATEGIES

## INFORMATION DISSEMINATION

### Overview

SRS Guidelines clearly indicated that a primary RUS function would be to facilitate the dissemination of relevant R & D findings, especially results from SRS-sponsored projects. The focus placed on linking VR administrators and practitioners to SRS abstracts and final reports implied a firm conviction that the approximately 2,000 projects constitute a valuable reservoir of information on vocational rehabilitation. However, there was concern throughout the project that the storage, retrieval, and dissemination functions should not dominate the role of the RUS. SRS monitors and consultants cautioned early against placing undue emphasis on information resources and the library function.

The training and assistance provided to the RUSs in exploiting available resources or establishing their own information centers was directed almost wholly to the SRS Research Information System (SRS/RIS). As the earlier discussion of the relationship between RUSs and the SRS Special Centers (R & T, RRRI, and SWRRI) indicated, few turned to the Centers as information resources on specific problems, even though publications of the Centers were used regularly. The extent to which the nine projects developed, used, and disseminated information resources varied markedly. The diverse patterns, as well as the degree of investment in information resources, appear to have been a direct function of both the RUS's view of his role and the continuing presence of energetic and capable librarians or assistants who created resource centers for their state.

### Information Classification and Retrieval

*A well-organized library is one means of increasing the likelihood that information in the literature will be placed in the hands of the DVR staff who can make use of it [Sather, Wisconsin].*

One of the major problems in establishing any information system is selecting a classification system (Dumas, 1968). At the time the RUS demonstrations began, there was no single, accepted classification system available for rehabilitation-related information. The possibilities included the Library of Congress Classification System, the Dewey Decimal System, the *Index* for the first 1,000 SRS/RIS abstracts, the several keyword indexes prepared by the University of Florida Regional Rehabilitation Research Institute, and the Oregon System (developed specifically for rehabilitation literature).

The Oregon system (Portal, 1961) is based on the Dewey Decimal System, with nine basic categories specific to rehabilitation-related literature. The category headings were "chosen from a variety of resources since there [was] no adequate comprehensive list of such headings known to exist" at the time the system was developed. Under the Oregon system, a document can be classified under only one subject heading; if it contains information on several topics, only that which seems most important may be selected.

The Oregon system was used successfully by Texas and Virginia agency librarians; both expanded the system to include terms from the SRS/RIS *Index* and other information systems such as ERIC (U.S. Office of Education). At the close of the demonstration period, the Texas librarian was implementing plans to computerize the library card catalogue and place a copy in each VR office in the state.

Buchanan of Missouri found the Oregon system, in use in the agency library at the beginning of the RUS project, inadequate for quick information retrieval. He developed a research utilization library separate from the agency library, using the *Index* to the SRS/RIS abstracts to classify about 600 documents. Buchanan also used the coordinate indexing system, suggested by Muthard (1968), which facilitates retrieval by allowing each document to be classified under several subject headings. A report concerned with mental retardation, sheltered workshops, and work evaluation, for example, could be classified and retrieved under all three subjects, rather than only one as in the Oregon system.

In 1972, three years into the RUS demonstration projects, SRS published the *Thesaurus* for the SRS/RIS. This *Thesaurus*, containing 844 index terms for rehabilitation-related literature, is now the authoritative indexing resource for the field. With the publication of the SRS/RIS *Thesaurus*, all abstracts of SRS R&D project reports were re-indexed using only *Thesaurus* terms. Since the *Thesaurus* was field-

tested by the RUSs and other rehabilitation practitioners and researchers, its index terms should be well suited to the needs of the field.

Methods for retrieving information from an information system include card and book catalogues, coordinate index cards, computerized keyword indexes, and other automated retrieval procedures. Descriptions of several of the most common retrieval mechanisms are contained in the Virginia final report. All SRS research reports can now be located in the *Index* to the SRS/RIS. Other documents in a particular collection must be retrieved by the method specific to that collection (e.g., a card catalogue). An RUS setting up an information system would have to choose from among those retrieval systems available depending on the size of the collection, the expertise of those assisting him, and his access to equipment such as a computer. Several of the RUSs developed written systems of library maintenance.

## The Virginia RUS Librarian

The Virginia agency library and its librarian were probably the most potent factors in the impact of the RUS program on the state's rehabilitation practitioners. Bassett saw the library as the "right arm of the Virginia RUS program." Designated as the Research Information Center of the agency, the library's major function was to "stimulate awareness and interest in research findings [and maintain] . . . material from which new ideas for program improvement may be generated." The efforts to achieve this goal were conducted by Miss Laura Edwards, the RUS Librarian, and were among the most resourceful and innovative documented in the RUS program. In addition to novel announcements of new acquisitions, Miss Edwards set up research information exhibits at conferences, workshops, and training sessions, with on-the-spot reviews geared to the topic of the meeting. She also used a "photolinker," an electrically wired "question box" which challenged the viewer with multiple choice questions and immediately informed him when the correct response was chosen. Miss Edwards' techniques for acquainting state office and field staff with library resources, and, particularly, new materials pertinent to their work, were varied and effective. She conducted research briefings for state office staff and gave orientation talks and tours to new staff members. Staff involved in initiating new programs or projects received specially selected packets of relevant abstracts. Evaluation slips attached to each document submitted to readers provided interaction between users and library staff.

A thorough discussion of the techniques used by Miss Edwards is presented as Chapter V, "Information Dissemination and Retrieval," in the Virginia final report. Other information available from the Virginia library includes *Guidelines for Establishing Libraries in Area or Local Vocational Rehabilitation Offices* (Edwards, 1971), *Guidelines for Regional Research Information Centers* (Edwards, n.d.), and *Implementing a Library System for the Virginia Department of Vocational Rehabilitation* (Edwards, 1969). EGA's *RUS Guidelines* also presents excerpts from these documents as an appendix.

## Local and District Office Libraries

Several RUSs made a concerted effort to place information resources in local and district offices. The Utah RUS established "mini-libraries" in several districts to house "current publications and periodicals, as well as selected texts relating to the field of rehabilitation practice." In Wisconsin, an assistant to the RUS aided a counselor in organizing a district office library using the same indexing system as that used in the central office library. The RUS supported this activity by purchasing shelving supplies, publications, and a microfiche reader. The New Jersey RUS and the Department's librarian established four local office libraries, called reference centers, on a pilot basis:

> These libraries were intended to be satellites of the main library, maintaining a storehouse of rehabilitation information regularly used by practitioners in serving clients.
>
> Secretaries were given the part-time assignment of local office librarians to organize (and control) field office resources, . . . and provide a tie-in with the central library. A library manual was developed, and the local office librarians were trained. Publications were added to their resources, and equipment (shelving and pamphlet holders) provided. Field office personnel . . . reported increased utilization. However, objective evidence [for this] was not [secured]. They found the procedures of the library manual too detailed. In lieu of these detailed procedures, the RUS attempted to have personnel responsible for the libraries set up a simple record keeping system, both for maintaining control of the documents in their collection and for some measurement of utilization. . . . Most office supervisors agreed in principle with the desirability of maintaining records, but . . . the absence of manpower prevented their carrying it out. This remains an unanswered problem to which the RUS feels continued effort is justified. . . . In spite of this, the RUS observed some positive changes, such as placing the local office collections in a more accessible location, improved organization of resources, and more attractive arrangements of materials.

Jacobs of Alabama embarked on a plan to build local office libraries which would be "accessible on a day-to-day basis to all rehabilitation

staff." He obtained a complete set of SRS/RIS abstracts for each area and local office library in the state. In addition, he placed the abstracts in the Region's colleges and universities with rehabilitation counselor training programs.

### Development of Information Packages

Literature reviews and annotated bibliographies frequently were prepared as resources for use in planning innovations. Sather describes the usefulness of annotated bibliographies in disseminating information:

> The Madison and LaCrosse District Offices became involved in the development of innovative approaches to job placement. . . . The RUS . . . worked with the job placement specialist in the Madison District on the development of an annotated bibliography on job placement which was used as a resource document in planning the . . . programs in both . . . District offices. . . . The . . . supervisor in the Fond du Lac Office expressed an interest in developing a more specialized job placement program in [his] . . . area. The RUS sent him a copy of the annotated bibliography for . . . use as a resource document.
>
> The bibliography includes 64 references to publications and journal articles. The summary notes for each reference are sufficient in most instances for program planning purposes. Yet, each reference includes the library catalog number so that any given publication can be easily retrieved from the library. The annotated bibliography is preceded by a simple . . . list of references with a page number following each reference. A user can then scan the list and locate the annotated listing for a specific approach . . . that is of particular interest. . . . The annotated bibliography is kept in a looseleaf binder so that it can be easily updated.

Sather also planned to prepare an annotated bibliography on the vocational rehabilitation of alcoholics and drug abusers, his area of program specialization, for distribution to all district and local offices and to every counselor specializing in such cases.

Literature reviews were another information dissemination service performed by most RUSs:

> There are some members of the central office staff who have occasionally utilized the services of the RU project associate in conducting short-term literature reviews in order to obtain information from the central office library. . . . For example, the Deputy Administrator recently approved the assignment of the RU project associate to conduct a review of the literature on the delivery of vocational rehabilitation services to the severely handicapped. The intent was to determine what innovative ideas can be field-tested in Wisconsin [Sather, Wisconsin].

Scott's report on the preparation of an information package on the use of rehabilitation facilities outlines the process:

> The Materials Development Center at the University of Wisconsin-Stout was contacted to obtain data about previous work done in this area. Several pieces of information were received from this resource, including the new Institute on Rehabilitation Services (IRS) publication, 'Vocational Evaluation and Work Adjustment Services in Vocational Rehabilitation.' Other documents were located in the [agency] library. The RUS reviewed all this information and abstracted the parts which appeared to be needed by counselors in order to properly use rehabilitation facilities.
>
> The RUS then decided that the materials must be [shortened] . . . to encourage their use by busy counselors. The data had to be logically ordered so the counselor could refer to the section which concerned him at any particular time. The bulk of the material was taken from the IRS study, with information added from the other sources. The Instructional Media department redesigned the cartoons in the IRS study, with very good results.
>
> Many favorable comments have been heard from field personnel, administrators, and other sources. Evidently, this is a valuable contribution of the Research Utilization Section.

The Facilities Guide has been widely distributed. It is routinely given to all new counselors and is being used as a text in a university counselor training program. Copies placed in the Stout State Materials Development Center are loaned frequently, and the state of New Hampshire has requested 100 copies for distribution to all counselors and supervisors. Scott continues to receive requests for the Guide, which is currently being reprinted for wider distribution.

### Newsletters and Abstracts

The use of newsletters and abstracts, like many other RUS activities, appeared to be a function of the role chosen by each RUS. Bassett of Virginia used newsletters to "develop a comprehensive system for research information dissemination," and considered them an essential function of the Virginia RUS program. The first California RUS published *Action Abstracts* and short reports of research for the first year and one half of the project. These were distributed to the field along with the Research BRIEF series of the SRS Division of Research Utilization. Schlamp reports that evaluating the effects of these activities was difficult, and although they probably did not stimulate innovation or change directly,

> they did form a bridge, a media of communication between the RUS and the

field. They helped establish the RUS's visibility. The credibility of the RUS was improved because of the general interesting nature of these reports and because they were seen as honest efforts to assist . . . through access to information.

Jacobs of Alabama published his newsletter, *Thoughts for Action*, as a "gentle reminder that a great deal of information is available." *Thoughts for Action*, initiated before the first SRS abstracts reached the agency, contained RUS-prepared abstracts of research reports. Each counselor received a three-ring binder, printed with the title of the newsletter on the cover, in which to keep his copies. *Thoughts for Action* was discontinued upon receipt of the SRS abstracts, but copies enjoyed "good acceptance . . . and our staff still request copies of the material [mentioned] and refer to past . . . [issues]."

The Texas newsletter, *Research Review*, is published quarterly and distributed to rehabilitation staffs in all five states in the Region. The newsletter is similar to a journal in size and format:

> We try to include articles which describe programs offered by various rehabilitation agencies, summaries of non-rehabilitation activities which are of interest to rehabilitation field staff, and lists of some materials (microfiche, books, fiims) which are available through the Texas Rehabilitation Commission library. . . . The *Research Review* also publishes reports of Research and Training Center activities to inform the practitioner of current research activities and findings. Field staff have published articles showing both their current innovative practices and research projects. The Research Section of the Commission submits its reports for publication to inform field staff and others of their department's findings. . . . Activities of Central Office staff are explained to keep everyone current of the dynamic program changes which occur within the Commission.

The Texas RUS receives several hundred requests each month for library materials listed in the newsletter; feedback from R & T Centers and other sources indicates that the newsletter sometimes leads to new research projects.

The Wisconsin RUS newsletter was published three times, all during the fourth year of the project. Advertisements of selected publications available in the library generated 105 requests. Filling requests was difficult, however, because the library was not organized for quick retrieval, and the RUS discontinued publication of the newsletter until the library could be reorganized.

The Utah and Massachusetts newsletters were not really research utilization publications. *Rehab Expressions*, published by the Utah RUS, was

produced inexpensively and contained items of pertinent information to individuals within the agency. The RUS occasionally presented new or innovative materials through this medium and the newsletter served as a means of information communication within the agency.

In Massachusetts the RUS and his RU consultant were instrumental in establishing the monthly *MRC Commissioner's Bulletin*. Although the Bulletin was not strictly an RU newsletter, it kept communication channels open and informed and involved all staff in any proposals for change.

Marinelli conducted a small project to determine the effectiveness of his newsletter *SPARK* as an information dissemination tool:

> On a pilot basis, three approaches to facilitate the flow of research information to Agency practitioners were attempted in three district offices. One office received training on the SRS Research Information System—its elements, how to use it, how information in the system could be matched to questions, issues, problems facing the practitioners. They were provided with search tools, shown how to use them, and had explained to them how the abstracts could provide expeditious answers to rehabilitation problems. Every six to eight weeks, a second office received a publication called *SPARK* (Selected Pieces of Available Research Knowledge), containing a list of approximately eighteen studies and annotations on each. Users were encouraged to request abstracts when the subject matter interested them. The third office received both the publication *SPARK* and training in the SRS Research Information System.
>
> The results clearly indicated the superiority of [*SPARK*] to the other method. More than 90% of the . . . requests for abstracts emanated from the offices receiving SPARK. Primary users of the abstracts were rehabilitation counselors. Users reported that abstracts were most frequently used for professional development and improvement of services. They also stated that the abstracts did not provide sufficient information of their own to be of benefit in professional development. However, they saved time by eliminating unwanted information and made it possible to locate more detailed reports.
>
> Based upon this experiment, *SPARK* was continued in the three offices involved in the pilot. The responsibility for responding to requests stimulated by *SPARK* was assumed by the Department of Labor and Industry Library. However, because of reduced manpower in the library, it was necessary initially to confine distribution of *SPARK* to those districts participating in the pilot. . . . District offices were added as the librarian felt able to handle the additional workload that the expanded distribution would stimulate. At the project's conclusion, all State Agency offices were receiving the publication.

Scott and Bassett included in their final reports some tips on publishing a newsletter. The importance of an articulate information package is summed up by Scott:

> The poor presentation of even the best thoughts will lessen their acceptance. . . . *What isn't read, won't be known. What can't be understood, won't be used.*

Furthermore, clear, concise presentation convinces busy field staff that " 'new knowledge' materials can be read and understood in minimal time."

Bassett reports on several techniques used by the Virginia Librarian in the *Linker*, the project newsletter:

> Make it attractive
>
> Columnize all articles for quick review
>
> Attempt to 'lead the reader on' to request or 'seek out' specific research reports
>
> Vary the color scheme so each issue will attract attention
>
> Keep the request form on the last page conveniently concise

Marinelli found many of the same elements critical to the success of the New Jersey newsletter:

> Through trial and error, and investigating similar publications in and out of rehabilitation, the key qualities for a successful (success being measured by the frequency in which field office personnel, instead of researchers and administrators, request publications) information newsletter have been identified and implemented. Publications listed in *SPARK* were only those that had relevance to State Agency practitioners. The newsletter was kept relatively short to avoid the intimidation often created by size. Information was conveniently grouped into familiar subject headings written in the common language of counselors and other practitioners. The various reports of six journals in the field of rehabilitation were made available through their tables of contents which were included in the newsletter. The latter feature has been the most successful, very likely because of the timeliness of journal articles, and the style of their presentation which is usually directed at the practicing worker.

Bassett also discusses the cost of publishing a newsletter. For the first four years of the project in Virginia, all newsletter costs, materials, publication, printing, etc., averaged $250 per month. By 1972 circulation of the newsletter was so large that collating and mailing could no longer be performed efficiently by project staff. Therefore, during the last two project years, collating, printing, and mailing were performed by a sheltered workshop under contract to the state agency. Direct costs were

increased using this method, but the indirect costs incurred in having these duties performed by project staff would have been greater.

## RESPONDING TO REQUESTS FOR INFORMATION

There are probably as many ways to respond to information requests as there are requests for assistance. A simple request can require a great deal of searching and numerous contacts before the specific information needed is uncovered. The following case comes from Scott of Texas, and outlines some of the activities involved in, resources used, and outcomes of responding to one such request:

> A written request for assistance was received from a counselor who was getting many public school referrals diagnosed as having language disabilities. The counselor wanted information on how to test these clients to establish a disability and to assist him in developing their rehabilitation plans. About the same time, a similar request was received by a Program Specialist from [staff of] the Vocational Evaluation program who had identified the need for information on testing the language learning disabled.
>
> The RUS conducted a search for information related to this problem in the Texas Rehabilitation Commission library. The data on hand was found to be inadequate and a search of ERIC and other sources provided further information. The RUS then learned that the Commission's researcher was very knowledgeable in the area of language learning disabilities and her assistance was sought.
>
> Many books, journal articles, dissertations, etc. were received and reviewed. The RUS, using information from these materials, compiled a paper describing the many behavior problems a language learning disabled client may exhibit. While compiling this information, the RUS sought the advice of the researcher. Included in the paper was a scheme for diagnosing language learning disabilities and a list of tests to use in doing so.
>
> Most of the data gathered [concerned] . . . language learning disabilities in children. The problem at this point was to make the information more relevant to clients sixteen years and older. . . . It was especially important that a testing scheme be identified for these clients, as most of the cases mentioned in the available information had an upper age limit of ten to twelve years. After many unsuccessful attempts to secure this data, the RUS learned that two professors at the University of Texas had a private practice specializing in testing for language learning disabilities in children and adults. Several test reports produced by these professors were obtained. They were reproduced to provide examples of tests and their interpretations for rehabilitation counselors.
>
> This information was then provided to the counselor requesting it, as well as to the Program Specialists interested in this area. It soon became evident that many other counselors could benefit from this data. Approximately sixty

copies of this paper have been distributed to all parts of the state, to other Research Utilization Specialists and to rehabilitation facilities' staffs.

Several letters, phone calls and personal contacts indicated that this information was beneficial and being used. The data aided personnel in understanding the language learning disabled and how the counselor should work with these clients. It enabled counselors to construct better rehabilitation plans for these clients. Many of these clients had previously been justified as retarded and had become juvenile delinquents. However, many language learning disabled persons have normal or above-normal intelligence and can perform very well in jobs requiring high level skills after appropriate remedial training.

## TARGETING INFORMATION AND ACTIVITIES

Although the RUSs were charged with promoting research utilization throughout the agency, none used the same techniques with all levels of staff or attempted to introduce an innovation at all levels of the agency at the same time. Bassett discusses the importance of selecting the appropriate audience for each activity:

> In the Virginia project, it was found that the nature of any innovation determined the appropriate level within the client-system for introducing the innovation.
>
> To initiate a programmatic change involving Department policy by introducing it at the counselor and local supervisory levels would be of no avail. Department policies are not decided at that level. On the other hand, to introduce meaningful . . . findings which would improve counseling techniques to the Department head or his deputy would profit little as the techniques must be implemented at the local supervisory and counselor levels.
>
> When innovations are introduced, those who will have the final responsibility for implementing them need to be involved initially if the innovation is to experience a smooth route to stabilization. For this reason, the RUS found it helpful to use small task groups or ad hoc committees from the levels that would have the primary responsibility of implementing the change.

Scott found that proposals requiring administrative decisions should be prepared in clear, non-technical language and contain:

1) expected outcomes,

2) who would be affected by the change,

3) cost of the program,

4) which personnel would be involved, and

5) for what length of time.

He adds that the written proposal should whenever possible be accompanied by a personal presentation. Timing is crucial in this process:

> The RUS must . . . pick the appropriate time for his presentation. If, for example, the administrator is faced with a tight deadline for preparing a new budget, the RUS probably will not receive a fair hearing for his proposal. If this happens, he must be prepared to accept immediate failure, punt, and wait until he has a better opportunity.

Marinelli varied his technique depending on the sophistication of the target audience. For example, he found that New Jersey facilities specialists and other staff concerned with mental health and drug addiction had extensive training and experience in their areas and "seemed to be able to independently cope with the problems confronting them." He therefore kept them informed of the latest practices in their fields by selectively disseminating information and occasionally securing requested audiovisual materials and publications.

Jacobs used an early needs assessment survey to determine the reference materials most frequently consulted by agency staff and used this information as a guide in "planning promotional activities." He believes that the most important target audience is the counselor-in-training: "Without question, the time to introduce people to the idea of research and research utilization is during [their college days], particularly at the graduate level," and would focus the majority of VR research utilization efforts at that group.

## MINIMIZING RESISTANCE

> *Use of research findings and recommendations . . . to a great extent is a matter of attitude and desire. If this can be built into the staff . . . then I think the job is well on its way [Jacobs, Alabama].*

Resistance to change is inherent in any organization. Jacobs of Alabama confronted the problem head on when he encountered resistance not only to the terms 'research' and 'research utilization,' but "even to looking for new knowledge." He first met in groups with the RU Advisory Committee and later with counselors, first-line supervisors, and state office supervisors, urging group members to identify and list "resistance areas or situations that would discourage the use of research literature." He then led each group in listing the types of activities needed to overcome the identified sources of resistance: "It was most encouraging in this exercise to note that as we began to list activities we could see the resistance . . . begin to melt away."

Tully of Massachusetts was also successful with techniques to bring resistance into the open so that a compromise could be attempted. For three months during his third effort to form an advisory-type committee for the project, his research utilization consultant held a series of meetings with all levels of agency staff. During these meetings the consultant "continued to draw out any unvoiced objections to facilitate movement toward agreement." As a result of these efforts

> the RUS was granted approval by committee members to visit district offices and hold meetings with former placement specialists and counselors in order to obtain the vital data needed and the local practitioner commitment required.

Since Tully faced one of the most unreceptive of agency atmospheres during the first three years of his tenure, it is worthwhile to examine several examples of his activities for reducing resistance. For a job placement innovation Tully met with participant groups in an effort to convince them to join together in considering both sides, pro and con, of providing placement services to their clients. A former placement specialist attended group meetings, describing his experiences, including the use of research methods to evaluate placement activities. Tully's strategy was calculated

> not only to illustrate how an RUS could carry out a short-term innovation project or 'temporary' system of collaboration with practitioners, but to attack a long-standing charge of apathy or reluctance of agency counselors to make an adequate commitment to function in the placement aspect of their role. . . . The measure of success for this strategy was indicated by the verbal and written statements from members of the three teams . . . and by the statements of their district office supervisors.

Tully also used "official and authoritative resources" to ensure credibility with his target audience. These sources included administrators and specialists in other VR agencies and VR agency state plans. He found that he generated cooperation with state office staff "in proportion to [the RUS's] expenditure of thought, energy and initiative, [doing] at least his share of the onerous chores, [risking] failure or disapproval of less enterprising colleagues." Tully never promised more than could be delivered. He instead tried to collect "enough information about the purpose or intent behind the request so that my search and dissemination would fulfill expectations."

Scott did not encounter significant resistance to seeking and using new knowledge among Texas agency staff. He accounts for this in part by his adoption of "a selling posture" in introducing an innovation:

This approach does not produce the resistance that an 'expert' may when he tells a person that a better technique should be followed. Most of the employees in the Commission are at a professional level and expect to be treated as such. There will always be those who are slow to adapt to change. This should not always be interpreted as resistance. This type of employee will adopt new techniques when he sees them being effectively used by a fellow employee.

If it is necessary, the RUS can seek administrative support for changing . . . operating procedure to bring about adoption of a resisted change. This is not seen as good Research Utilization practice, but it can be used when other attempts fail.

Schlamp reports that resistance was not a problem for the California RUSs. To the contrary, "once a need is perceived by field personnel, they embrace any new approach which may by any stretch of the imagination be regarded as providing a solution." Schlamp believes that the crucial area was, in reality, the perception of a need. Once a need was recognized by the agency staff and clarified through efforts of the RUS, resistance was minimal.

Almost all the RUSs report that resistance decreased with time. Bassett notes that successful studies and projects created "credibility" for the RUS. Tully found Massachusetts staff more trusting "after satisfactory initial experiences with the relevance and usefulness of the knowledge and materials [given them by the RUS]."

## WORKSHOPS TO PROMOTE KNOWLEDGE USE

Three RUSs, Gant of Utah, and Kohler and Scott of Texas, used workshops frequently with success. Scott reports on the two "Day of Reporting" workshops in Texas:

[These] conferences . . . utilized the concept developed by the Hogg Foundation. [They] brought together researchers from the R & T Centers . . . and R & D researchers in the . . . region. Brief presentations were made by each of the researchers to explain his project.

The first conference received many very good comments. Its effect was limited because of the lack of attendance by rehabilitation counselors and other practitioners.

The second 'Day of Reporting' was co-sponsored with RT-13 and brought counselors and supervisors together with researchers. The practitioners' comments show that they felt the conference was very worthwhile and wanted to implement some of the researchers' ideas in their own offices. Both the researchers and practitioners felt that the [second] conference was too

short and wanted to have been able to hear more of the presentations, [four group presentations were made simultaneously]. This limitation was realized before the conference, but a lack of funds to pay participants' per diem did not permit a longer conference.

Workshops and seminars were the primary method of operation for the Utah RUSs:

*Drug-Awareness Seminar*: The purpose of the Drug-Awareness Seminar, held early in the RUS program, appeared to have been to acquaint rehabilitation workers with the problems of drug abuse, the identification of drug abusers, and some alternative approaches to the rehabilitation of drug abusers.

*Employer Seminars*: Employer seminars were held . . . [to] acquaint Utah's employment community with employment of the handicapped as a feasible business practice. Participants were introduced to employment of the handicapped as a profit-making concept, were asked to deliberate on problems of employing the handicapped, and were given answers to their concerns.

*Employment Agency Seminars*: Private and public employment agencies were introduced to the need for employment by handicapped individuals. The rehabilitation process was described to agency participants and liaison personnel from . . . the rehabilitation agency were assigned to work with each employment agency. Private agencies were given descriptions of individuals who were work-ready and . . . needed placement [Gant, Utah].

Jacobs of Alabama conducted a workshop on epilepsy for a state district office. Staff in the office stated that they knew little of the problems of the epileptic, so they agreed to search the SRS abstracts to find literature on epilepsy. Every two weeks the group met to discuss their findings and, more importantly, to decide on possible action plans to better identify and serve people with epilepsy. Jacobs also used the workshop technique several times during the initial phases of his project to produce a 12-program series for Educational Television:

The main statewide project that we participated in was . . . our Homemaker Rehabilitation Project. . . . There was limited information on the rehabilitation of the handicapped homemaker, and in our State, a closure as a housewife or home manager or family worker, to say the least, had not been encouraged and was looked upon as something of a second rate closure. We had no formal training for people in homemaking or home management.

This program started with a workshop held at the University of Alabama in connection with the Home Economics Extension Service. . . . Our State Office and Area Office Supervisors, . . . representatives from the Employment Service, Department of Pensions and Security, Home Economics Group, and others [attended] to see how we could work together in serving the handicapped homemaker. This . . . two-day statewide workshop . . . was followed

several months later by another workshop in which we began to identify problems and make plans for action.

Later, with the help of the people from the university and the people in the facility programs in our State, a statewide meeting of approximately eighty . . . people was held to identify the . . . facilities . . . that could be utilized . . . in training for home management. We also developed a series of twelve programs to be shown on Educational Television, and a newsletter. This resulted in plans being set up for [home management] training in our facilities.

## IN-SERVICE TRAINING

Several of the RUSs, besides Buchanan of Missouri mentioned in earlier sections, had strong links with agency in-service training activities and effectively used this medium to broaden their effect on agency operations. The fourth Utah RUS was placed in the same unit with the Staff Development and Training Specialist and consulted regularly with him. Scott provided the Texas agency Staff Development Section with information and occasionally proposed training activities to them. He initiated plans to train counselors to better help physically handicapped students:

Recently a very brief survey on accessibility of Texas' higher education facilities to the mobility impaired was conducted . . . at the University of Houston. [The RUS] proposed to the Staff Development Section that a program be developed to train counselors responsible for college caseloads to understand and recognize architectural barriers. Counselors would also learn about architectural standards . . . and would be encouraged to approach the colleges to encourage their staffs to make the campuses accessible. Counselors would be presented models of other colleges' programs and advised of how to use campus service organizations to do a thorough survey . . . to note architectural barriers. This survey information would then be submitted to the administrators of the colleges to aid them in planning for modifications. This program has not been conducted, as the plans are still being developed.

In providing research utilization input to the in-service training process, Scott often provided information to the program specialists planning training workshops; supplied materials such as films and audiotapes; and prepared packets of materials, using pamphlets, lists of library materials, appropriate journal articles, and other information. Texas RU Section staff also appeared as speakers or panel members at training workshops, bringing exhibits on RU services and samples of materials available in the library.

Buchanan directed the statewide in-service training program in Missouri, using research findings to supplement information from other sources: "By using this medium and working closely with the staff

training officer, it was felt that appropriate information could be placed directly in the practitioner's hands and, through training, [effective] changes could occur." Buchanan's in-service training plan involved the use of consultants to assist in program design and in the selection of qualified instructors. The consultants were also involved in "reviewing relevant information from research studies . . ., securing information from other information sources, and tentatively packaging selected information for program usage." For one training sequence, Buchanan designed a program to improve counselor skills in interviewing:

> The consultant and the project director carefully screened information available. . . . Training was partially based on findings of . . . 'Reactions to Disability XII: Structure of Attitudes Toward the Physically Disabled' [SRS Project No. RD-1276, 1967]. In addition, the consultant, who eventually became the instructor, based considerable program content on . . . Benjamin's publication 'The Helping Interview'.
>
> A pre-meeting survey form was designed to . . . determine attitudes . . . [toward the] client population. . . . In addition, a post training evaluation was completed. . . . Other references were used and a reference list given to the participants. . . . This was the first time highly professional training directed specifically for counselors had been undertaken. . . . It was new to the counselors as well as . . . the central office people involved. The area meeting arrangement enabled the faculty to work with smaller groups and use role playing and small group sessions effectively. Counselors and first line supervisors of both Vocational Rehabilitation and Disability Determination staffs were participants.
>
> Of particular interest . . . was . . . that this type of a training meeting . . . elicited a . . . high degree of participation. . . . It seemed the participation was considerably greater than any [agency] training in which our professional staff had been involved during the past several years.
>
> Material distributed and discussed . . . included the abstract . . . on . . . RD-1276 and material on micro-counseling developed by the instructor. . . . [This] first . . . professional in-service training activity at the counselor level was successful. Verbal reactions of individuals following the training session and for some time after indicated that the training enabled them to learn and practice new interview skills which would result in improved casework.
>
> By-products of the area meeting concept are worthy of mention. Prior to the area training plan, it was becoming increasingly expensive to handle travel and maintenance costs for staff training. . . . The area meeting plan alleviated the high cost for staff travel . . . since approximately 75% of the participants were at or near their 'home base'. Some of the . . . savings, however, had to be used for increased faculty cost. It was possible to . . . use the same program in each area, and this greatly reduced preparation time. It was [sometimes necessary, however] to make modifications in the training to meet specific area needs; this occurred much more often than was originally believed to be

necessary. Personnel from a district office met and became used to working with peers from other offices in the same geographical area. . . . One of the negative findings [was that] the area concept . . . added greatly to the details of arranging meetings . . . more meeting sites and dates were involved.

In each professional training meeting, and in some of the others classified as non-professional in nature, every effort was . . . [made] to screen available . . . information that seemed . . . important to the . . . subject. . . . From this approach to research utilization . . . it was possible to effectuate changes in practices at both the counselor and supervisory levels and . . . gain . . . widespread support for such changes.

Marinelli frequently linked field needs to agency training staff and also worked with training staff on several RUS-introduced innovation projects:

In contacts with field personnel, a frequent complaint . . . was the infrequency of training and its questionable quality. The same dissatisfaction came from some members of the Research Utilization Advisory Committee. Through the Research Information System of SRS, the RUS learned of the Studies in Continuing Education for Rehabilitation Counselors by Miller, Obermann & Roberts and . . . the learning units produced on cassette tapes in these Studies.

A set of tapes was secured and a sample . . . presented to the Research Utilization Advisory Committee. The response was supportive from some members . . . with consensus that [a] field trial . . . should be made. The tapes and transcripts were duplicated and distributed to four offices which had previously expressed an interest in trying them. . . . Supervisory and counseling staff from all of these offices participated in a training program covering the purpose of the learning units . . . and manner of using the tapes. The results of the field trial were . . . presented at a statewide meeting of administrative and supervisory personnel. The general feeling was that the learning units were considerably superior to any of the resources which the Agency has used in the past. The district supervisors asked that a complete set of learning units be provided to each of the local field offices. A compact package of tapes and transcripts was duplicated and made available to each of the districts along with cassette tape recorders. A further evaluation is planned to determine the extent of use of these tapes and the value they provide toward staff development.

The RUS worked with the training section in planning and developing a Job Seeking Skills and Job Development Training Program. Following the identification of the need for improved methods in preparing severely handicapped for employment and in seeking employment, the Job Seeking Skills and Job Development Program, experimentally developed and refined at the Minneapolis Rehabilitation Center, was determined to be an appropriate response. The RUS worked with the training section in planning the pilot training program and involved them in the training so that they would develop a capability of conducting future training of practitioners in Job Seeking Skills and Job Development.

## AGENCY POLICY AND PROCEDURES MANUALS

The revision of an agency Policy and Procedures Manual is rarely thought of as an RUS function. Yet, both Marinelli of New Jersey and Buchanan of Missouri demonstrated the efficacy of the RUS as a consultant in this activity. In assuming the task of revision, both RUSs responded to expressed needs. In both states Manual contents were reorganized, and obsolete sections were purged. The indexing and cross-referencing systems of both Manuals were revised. (Buchanan did this himself; Marinelli consulted with the Rutgers School of Library Service.)

The two RUSs used different approaches to meet agency needs. Marinelli's decision to review the Manual came as a result of "chronic complaints" from field staff. Their problems with certain areas of the Manual spurred him to draft and field-test a methodology for conducting a study on the Manual. With administrative support and the assistance of his RU Advisory Committee, he collected, organized, and synthesized information from the entire field staff. As the revision proceeded, material of little or no immediate concern to the field counselor was eliminated. Marinelli is presently considering the development of a second Manual for administrative and supervisory personnel; the new Manual will include the policies and procedures of other VR agencies.

The revision of the Missouri agency Manual was proposed to Buchanan as "one of the major needs of the agency." Therefore, he led an administrative committee to study the policies and procedures in use. The committee singled out existing policies for change and suggested new policies and procedures to be added to the revised Manual. Buchanan notes that his involvement in this effort gave him "immediate access to the system of determining policies and procedures for the agency." Because no procedures existed for updating the Manual, Buchanan developed a formal procedure whereby any member of the agency's staff could suggest changes. These suggestions had to be forwarded through the district supervisor to the Research Utilization Specialist, who presented the proposed change first to appropriate state level staff and finally to the Director for final action. A copy of Buchanan's "change policy," which he believes unique, is an appendix to his final project report.

Both Buchanan and Marinelli employed RU techniques in revising their Manuals. Marinelli collected the Policy and Procedures Manuals from the eight other RUS states for guidance; Buchanan became in-

volved in developing new policies for incorporation and used findings from SRS research when appropriate.

Both men responded to expressed agency needs, incorporated information and ideas new to the agency, and used skills in packaging information in an easily retrievable manner. In both cases, the focus was on the involvement of the user; Marinelli obtained input from all field staff at the outset, Buchanan incorporated a formal network for transmission of counselor suggestions for change. Nevertheless, the outcome of the revision process indicates a danger point for the RUS: Marinelli withdrew from the Manual update process once the major revisions were complete; Buchanan, however, accepted the responsibility for continuing Manual maintenance, an activity which should not be included in the responsibilities of an RUS position.

## PROGRAM PLANNING, DEVELOPMENT, AND EVALUATION

Linkages with the agency program planning and evaluation staff were viewed by several RUSs as excellent methods for introducing new knowledge into practice. The Massachusetts RUS, for example, assisted agency program planning staff by providing

> linkage to other state agencies having program evaluation units, by consultation from the RUS on ways of improving agency practice, by adapting methods and staffing patterns found effective in other state VR agencies, and by offering to implement any promising innovation recommended by an interdepartmental committee composed of members of the agency's program planning and research units and the Division of Client Services.

Gant of Utah was extensively involved in program planning activity. He participated in developing the agency's annual program plan, a "bank of information" on program evaluation, and the agency's Program Evaluation Guidelines. He also made several local and regional presentations on these topics. His report, however, does not elaborate on the content of these activities, or if any research utilization techniques were used.

Scott (Texas) was not frequently involved with the agency's Program Evaluation staff, but sometimes identified pertinent information and made it available to them:

> One example of the RUS's aid in program planning is participation on the committee which has been involved in the preparation of a position paper . . . on services to groups of handicapped people.

As a part of this effort, we wrote letters of inquiry to all other states to see if guidelines existed which might be adapted for the Texas Program. We also made available to the committee our library and microfiche report files. Research Utilization Section staff personally researched the possibilities of providing group services in the areas of transportation and diagnostic services.

All this information is being synthesized and will be presented to the administration for their consideration.

Scott points up the efficacy of being aware of new program planning activities even before the RUS's involvement is requested:

The commission is planning a Homebound Program. . . . The RUS learned of this plan, began a search for information on other homebound programs, and attended a session on the subject at the annual National Rehabilitation Association convention. The large amount of data gathered was shared with the Program Specialist who will be responsible for the program.

At the close of the demonstration period, Scott was seeking administrative support for a closer working relationship between program evaluation and research utilization activities in the agency. In this respect, he notes that the Research Utilization Section might make use of Program Evaluation reports for identifying agency needs.

Marinelli stresses the importance of strong ties with staff having program development responsibilities. His placement in the same administrative unit with New Jersey program development staff promoted good communications. To keep communication channels open, he included two agency program specialists on his RU Advisory Committee and maintained frequent and close contact with them to secure their advice and direction. In one experience

the RUS was a resource to a Program Development Specialist in two demonstration projects concerned with the delivery of services to the disabled-disadvantaged and the disabled public assistance recipient. Besides providing a literature review, contributions were made to the design of the study based upon the review. Paraprofessionals were included as part of the staffing pattern in one project, and job placement specialists in the other, both features unique and new to the Agency.

Jacobs proposes as ideal a team approach combining the skills of the agency specialists in research utilization, program planning, and training and staff development to "give emphasis to program evaluation and program planning."

## AGENCY RESEARCH ACTIVITIES

All RUSs had some degree of involvement in agency research activities. Gant of Utah took an overseer's role:

> All research activities conducted within the Division of Rehabilitation Services generally lay within the purview of the RUS. He monitored research activities and made recommendations to the State Director on the basis of evaluation of research proposals.

Several of the RUSs were involved in the preparation of proposals for research projects:

> In view of the new legislative mandate to place priority on services to the severely handicapped, the RUS has been given the charge to explore possibilities for the development of projects to serve the severely handicapped. The RUS had already drafted one proposal to provide staff services to an interagency task force on technology transfer . . . to deal with specific problems in the rehabilitation of the severely handicapped.
>
> Recently, the RUS has been working with the Medical Director of the Neurological and Rehabilitation Hospital, a professor in Highway Safety Studies at the University of Wisconsin, and DVR district office staff on the preparation of an R & D project application. The long term goal of the project . . . is to demonstrate more effective and efficient ways of meeting the vocational rehabilitation needs of severely handicapped individuals. Special emphasis is to be placed on the development of a sophisticated program of driver education and driver training. Those handicapped persons who are successfully trained to independently transfer in and out of a car and safely drive in traffic will be able to drive back and forth to a job training site and, eventually, to a place of employment. Other DVR services will also be provided as needed. Those severely handicapped homebound persons who are not willing or able to drive will be evaluated and, if feasible, trained in jobs that can be performed in the home (e.g., the production of microfilm and programming for electronic data processing) [Sather, Wisconsin].

Buchanan of Missouri collaborated with the Missouri RRRI in the development of a research utilization project which is described in Chapter III. In Texas, both RUSs worked with University of Oklahoma RRRI staff to propose a Research Utilization Laboratory (RUL) to be conducted jointly by the National Aeronautics and Space Administration (NASA) and the Social and Rehabilitation Service for the purpose of applying technology from NASA and other sources for the benefit of the handicapped:

> The . . . RUS contacted Southwest Research Institute (SRI), which has a contract with NASA to use technology to solve problems in non-space related areas. The RUS interested the Biomedical Applications Team (BAT) in

working with rehabilitation agencies to help them solve problems of the handicapped. The Biomedical Applications Team met with Program Specialists, rehabilitation counselors and rehabilitation facilities' staffs, and spoke to groups of physicians. [Team members] gathered lists of needs in all areas of rehabilitation within the region.

This BAT-RUS effort resulted in the production of several devices to assist the handicapped. Work is still being done on some of the devices and others are currently in use.

This effort led to the development of the RUL proposal, which contains an interesting mechanism for relating RUL work to expressed needs: Personnel are to be placed in each state VR agency in the Region to identify needs of agency clients and relay those needs to a proposal development section. A proposal is to be developed and then presented to the technicians to determine if existing technology is sufficient to solve the problem. Although the project was approved it has not yet been funded. Scott believes, however, that it "represents an excellent Research Utilization effort to link available resources with problems."

In another instance, Scott found that the only way to respond to an expressed need was through the development of a research project:

The Deputy Commissioner of the Texas Rehabilitation Commission was concerned about the length of time from referral to acceptance of clients in the Houston area. The RUS gathered information related to this problem and sought assistance from the RRRI in Oklahoma, which resulted in the preparation of an R&D Grant application. Because sufficient information was not available, the R&D project was felt to be necessary in order to develop new techniques and gather data to solve the problem.

The 'Faster Services to Clients' project was fun[illegible]and is currently underway in Houston. The project director presented the [illegible]ster Services' program at the 'Day of Reporting' (May, 1973), and generated a strong interest in the project among the participants. An article concerning the project was published in the *Research Review* which gave further publicity to this new technique. Additional articles are planned for the *Research Review* to encourage adoption of positive findings of the project.

SRS involved all of the RUSs in the preparation of materials for the National Expansion Grant Project (PA/VR) to increase rehabilitations among public assistance recipients. In addition to attending workshops and developing written materials for training, several RUSs assisted their own agencies in preparing PA/VR Expansion Grant applications. In New Jersey the Rehabilitation Welfare Coordinator consulted Marinelli in the preparation of the state's Expansion Grant proposal.

Schlamp reports that the California RUSs often became "advocates for more applicable research" in the California agency:

> Whatever the cause, investigations which involved research and claimed the attention of personnel at other than the district level, became constrained into a strict research model. The RUS . . . became the spokesman for the need to modify such an approach. He presented the needs of field personnel, the applicability of the research results, and questioned the necessity for innumerable details.
>
> As a result of these discussions, some projects were dropped altogether because they required . . . an investment of time and attention to detail which was more than the field had anticipated. Other projects were attacked with renewed vigor and interest in the research aspects because of this consultation. Most of these projects continued with the evaluation details considerably modified from that which Research and Statistics would have desired, but with sufficient detail to allow the staff to draw conclusions that would not have been possible otherwise.

## THE USE OF DEMONSTRATION PROJECTS

Although each RUS planned and conducted at least one fullscale subproject to introduce an innovation, they did not all agree that demonstration projects are the best approach to the task of research utilization. Tully speaks for the majority:

> A research utilization innovation project in which an RUS assumes an active role as collaborator with practitioners in planning, conducting, and evaluating a change process cannot only provide significant data regarding agency problems, attitudes, and practices upon which to base administrative decisions, but it can also develop in practitioners a heightened capacity to utilize relevant information in their daily work.

Jacobs, on the other hand, does not agree completely, especially if the RUS's primary goal is to stimulate use of SRS-sponsored research:

> In my judgment, the information contained in the research that has been completed thus far [is] . . . of such a broad base that it is impractical to try to initiate [its] use by only a series of small pilot projects or conferences relating to specific subjects.

The EGA evaluators identified 27 "blue ribbon" demonstration projects, and regard these as among the most outstanding of all RUS activities. Each is described in EGA's *Final Report* (Glaser & Backer, 1974a), including the information base used to develop the project and outcome measures to date. Rather than duplicate this description, only three of the blue ribbon projects are included here; each was chosen for

the extra insight on the mechanics of the RU process provided by the RUSs' narratives.

## Bassett: Capitalizing on the Stages in the Adoption of an Innovation

The research utilization literature contains several theories on the process of change within an individual or group. Rogers (1962), for example, has identified seven stages in the process: awareness, interest, mental assessment, trial, evaluation, adoption, and stabilization. In reviewing Rogers' theory, Bassett (Virginia) notes that individuals will "back slide" at any stage unless they receive support toward ultimate adoption and stabilization; such support is referred to as "process helping."

Bassett of Virginia found it helpful to keep a sharp eye on his clients' progress through the seven stages, offering encouragement along the way to prevent "back sliding." He reports on one of his "blue ribbon" projects from this perspective:

### Awareness

Material relating to the concepts of behavior [developed at] . . . the University of North Carolina, Chapel Hill, . . . was discussed with the Department's Deputy Commissioner for possible implementation at the Woodrow Wilson Rehabilitation Center (WWRC). The Deputy Commissioner (Mr. Ed Justis) placed a telephone call to the center Assistant Director (Mr. Curtis Iddings); apparently the Center had just had a discussion concerning [recurring] behavior problems.

Justis: 'Mr. Bassett has some information on behavior modification. I would like for you and Mr. Smith (Center Director) to get together with him and go over it.' The Deputy Commissioner here was, in fact, serving as a 'gate keeper.' . . . The RUS forwarded the material to Mr. Iddings and arranged for an appointment to review the material with Center administrators. Center administrators were requested to circulate the material among their staff.

### Interest

The RUS met with Messrs. Smith and Iddings, [together they] visited the Virginia Treatment Center (VTC) in Richmond where work was being done in the area of behavior modification. After viewing some videotapes available at VTC, . . . Mr. Smith was becoming quite interested.

Smith: 'Curtis, do you know where those dormitories at the other end of the grounds are? Perhaps we could start a small group off there'. Iddings: (No remark).

Several days later Mr. Iddings returned the materials with the comment that the technique appeared to require too much staff for practical application. . . . At this point the innovation could have 'back slid'. However, the RUS agreed! But forwarded additional material relating to behavior modification, from the University of New York at Stony Brook, which involved less staff and appeared less complicated.

At this time . . . the RUS [learned] that the Research and Training Center at West Virginia University . . . had been involved in practical applications of behavior modification techniques at that State's Comprehensive Rehab Center. . . . The RUS notified Mr. Iddings and asked him if it would be 'helpful' to have R & T Center staff visit the Center to 'discuss in more detail' the implications for a behavior modification 'try out' at WWRC. . . . All WWRC program supervisory staff were present [at the September 24, 1970 meeting]. At this meeting, Mr. Iddings appeared to be the prime advocate of a 'trial run.'

Mental Assessment

Although the process identified as 'mental assessment' had been experienced by Mr. Iddings sometime between August 15, 1970, and September 24, 1970, a unanimity must have not occurred at the same time; nevertheless, the forces were in action.

In October 1970 the Virginia Rehabilitation Association was to meet. . . . The RUS had been appointed to the Program Committee and arranged for Dr. Joseph Moriarty, Director of the [West Virginia] R & T Center, to deliver a talk concerning 'Behavior Modification and Its Implications for Vocational Rehabilitation.' At the end of this session, the WWRC Director . . . requested that the RUS, 'Get Dr. Moriarty to come over to the Center to discuss . . . behavior modification with us.' Dr. Moriarty was the R & T staff consultant who visited the Center in September.

Trial

Shortly after Dr. Moriarty's visit to the Center (December 3-4, 1970), a 'trial run' was set up in the [Center's] Work Evaluation Unit. . . . At about this time Mr. Sam Johnson, Unit Supervisor of Work Evaluation at WWRC, contacted Dr. Donald Thompson of nearby Mary Baldwin College. . . . Mr. Johnson discussed the 'new program' with Dr. Thompson who himself was an authority in behavior modification techniques. This information was reported to the RUS who arranged a meeting with Dr. Thompson, Mr. Iddings, Mr. Smith, and Mr. Johnson. It was agreed that during the 'trial run' Dr. Thompson would serve as a part-time consultant to aid in assisting WWRC in the 'new approach.' Dr. Thompson was serving as a 'process helper.'

Evaluation

Subsequent evaluations of behavioral changes were recorded over a period of several months. Positive results were observed. The administrative staff of the Center became increasingly 'sold' on the experiences gained in the 'trial run.'

### Adoption

In January 1972 the . . . Woodrow Wilson Rehabilitation Center adopted the 'new knowledge' centerwide. All clients at the Center are involved in behavior modification and positive results are experienced daily. Dr. Thompson is now employed by the Center as a 'full' part-time consultant.

### Stabilization

The 'new technique' is no longer 'new' at WWRC; it continues to grow and expand. Center staff now have been asked to assist other agencies and states in helping them begin behavior modification programs.

At this time, Mr. Smith has recently passed away; Mr. Iddings has been transferred to the Department's Spinal Cord Project; and Mr. Johnson has resigned. Behavior modification, however, remains a vital element in WWRC's service delivery program.

## Sather: Experiments with a Packaged System for Stimulating Change

Never completely comfortable with the RUS role or the philosophy of the experts on research utilization recognized by SRS, Sather of Wisconsin explored other theories and other systems to reach the goal of program improvement:

The RUS has experimented with different techniques of promoting the use of research findings. . . . The ultimate purpose is to promote program improvement. Several problems have arisen, including . . . (a) assessing the relevance and validity of research findings; (b) disseminating research findings to those who would be likely to make use of them, and (c) demonstrating that measurable program improvements can be directly related to specific research utilization activities.

The RUS [believes] that the rate of progress will be accelerated by using a unique systems design methodology called *work design* which was developed by Professor Gerald Nadler of the School of Engineering at the University of Wisconsin.

The basic purpose of the Work Design Project is to demonstrate that this unique approach will result in the development and implementation of improved systems of planning and service delivery. In the work design approach a new system is designed from scratch. The primary focus is on the identification of the needs of handicapped clients and the means by which these needs can be met, rather than on the most efficient use of manpower and case service funds. Practitioners are not defensive during the design of a new system because it is never suggested that what they are currently doing is right or wrong. Their attention is focused on the design of a new system of service delivery including a system for measuring impact on clients. Rather than feel

threatened, they feel positively enthused. The research utilization issue is not one of overcoming resistance to change, but assuming full responsibility for the implementation of change.

The [Work Design] project was initiated in the Madison district office on a pilot basis. A system design consultant, with the assistance of a more experienced consultant, worked with five groups of DVR staff in the design of new systems for first line supervision, staff development, the Social Security Trust Fund Program, the Homecraft Program and the Alcoholism Program. The RUS was directly involved in several work design group meetings involving one former alcoholic client, two DVR counselors, two lay alcoholism counselors, and one firstline supervisor.

A . . . group approach to . . . conducting . . . meetings enabled all group members to fully participate and contribute ideas.

A question was raised regarding the value of the project and it was temporarily discontinued. However, the field office staff expressed disappointment and made it clear that they wanted the project to continue. . . . The decision was made to continue with the project at a reduced level of funding. The RUS and the four supervisory staff from the Madison district office then took part in a one-week seminar on the work design methodology.

At this point the five-year demonstration period was drawing to a close. Sather plans to continue his work design project, leading work design groups and training supervisory staff who have attended work design seminars to lead such design groups themselves. Sather believes the project is very promising:

Work design itself may prove to be the most sophisticated model of research utilization. There is great potential for bridging the communication gaps among researchers, administrators, supervisors, counselors, and clients, and potential for more rapidly advancing the state-of-the-art in rehabilitation.

## Marinelli: Conducting New Research To Fill a Need

In discussing needs with New Jersey agency staff, Marinelli found much supervisory dissatisfaction with "quantity of closures" as a measure of counselor performance. The supervisors wanted a "more valid instrument" to measure difficulty of closure for individual cases. However, an RUS review of the literature showed that such a measuring device had not yet been developed:

After a review of the literature which showed that no such measuring device existed, the Bureau of Economic Research of Rutgers University conducted a statistical analysis of R-300 data with the goal of developing a practical tool

for measuring the difficulty of rehabilitation cases. Unfortunately, not all of the R-300 data were placed on computer tape in a way that all records could be utilized. The researchers had no way of knowing whether or not there was a biased sample. Therefore, it was necessary to delay any further efforts in the study until data processing was capable of producing complete records needed for this research. Shortly thereafter, the RUS learned of another study, recently completed, which appeared to have potential for improving the measurement of counselor performance. The study, conducted by Duane T. Sermon of the Minnesota Division of Vocational Rehabilitation, is entitled 'Case Difficulty Index: An Expanded Measurement of Counselor Performance.' The Case Difficulty Index used in this study is now a part of the counselor performance measurement in the Minnesota State Agency.

The RUS presented the findings of the study to the Chief of Field Services and . . . his immediate subordinates in a series of individual and group meetings. This resulted in a decision that two of the seven districts in the State Agency undertake the Difficulty Index on a trial basis. The RUS was confronted with a significant amount of reluctance among the two districts to this idea. Discussions . . . held with field personnel directly involved in the pilot study . . . helped to allay most of the concerns.

Data were collected using the Case Difficulty Index for one year in the two districts. The data were collated, analyzed, and a report prepared and distributed to appropriate staff. Following a series of discussions with personnel involved in planning and implementing the Study, the decision was made to have the Difficulty Index used as a performance measurement as soon as Data Processing was able to generate the necessary reports. In the meantime one of the two Districts participating in the Pilot has continued to use the Difficulty Index even at the expense of collecting and computing data manually.

The RUSs' experiences with demonstration projects indicate that judicious limited involvement in such projects, with evaluation components, promotes the view that systematic introduction and assessment of change is possible. Such experiences remove change from the realm of divine inspiration or administrative fiat to an understandable, controllable process. There is one major hazard to an RUS in the use of demonstration projects as research utilization activities. The RUS who in using this technique becomes identified as the director of a specific demonstration project, will no longer be perceived as a consultant available to help with problems across the board. Instead, the RUS role will become identified as a specialist position interest in a narrow aspect of agency operations.

# DISCUSSION: OUTCOMES AND IMPACT

The problems faced in measuring impact objectively are well stated by Marinelli of New Jersey:

> Quantifying the achievements of the RUS and their resulting impact on the Division's program was extremely difficult. Areas of . . . involvement were evaluated objectively wherever feasible, and subjectively [otherwise]. However, the RUS's specific contribution to each of these areas was not subjected to planned assessment, except as part of the performance evaluation system of the State Agency. On the other hand, the specific role played by the RUS provides evidence of his contribution to the success or failure of the particular activity.

In this chapter we will present a discussion of outcomes and impact for the projects based on evidence from the nine final reports and a short summary of EGA findings. Each RUS, except Buchanan of Missouri, had a chance to react to EGA findings and conclusions in his final report; some of these reactions are included also.

## INFORMATION STORAGE, RETRIEVAL, AND DISSEMINATION

The outcomes of information storage, retrieval, and dissemination activities depended on the perceived relevance of the information contained in the SRS Research Information System, the existence of an agency library, the skill of the librarian available to work with the RUS, and the RUS's interest in such activities. Overall, two states had active, comprehensive information system activities; three made significant attempts to integrate the SRS/RIS into agency library holdings and disseminated a large amount of information; and four made sporadic efforts to store and disseminate research information but did not attempt to establish or operate an integrated information system.

In Texas a professional librarian organized a responsive agency library. The librarian from the Minnesota VR agency has visited the

Texas Library to study their adaptation of the Oregon classification system, and the Texas Commission for the Blind is setting up its own library based on the TRC model. The library function, coupled with the promotional RUS newsletter, significantly increased staff awareness of and interest in new information. Evidence for the effects of Texas information dissemination activities includes not only the five to six hundred requests received from each edition of the newsletter, but also field comments that staff first learned of some agency programs from this source. Scott reports that requests generated by the newsletter are still being received from issues almost two years old, and that the first requests from the latest edition were received within an hour after distribution had begun. The Texas Commission for the Blind has asked permission to reprint a *Research Review* description of the State School for the Deaf and Blind in their school brochures. The major focus of Scott's RU activity was information dissemination; many of his best projects involved state-of-the-art papers which were artfully packaged and widely disseminated. He has organized an excellent system for this type of research utilization activity. For example, his *Counselor's Guide to Using Rehabilitation Facilities* is used not only in the Texas Agency, but also in several counselor training programs in the Region. Copies have been requested for all New Hampshire counselors and supervisors, and the Guide is currently being reprinted for wider distribution.

In Virginia an innovative librarian initiated an information storage, retrieval, and dissemination program unequaled for its creative outreach efforts. The librarian, Miss Laura Edwards, reports that 85 percent of central office staff and 20 percent of field staff use the agency library, a significant indication of its value considering that the average practitioner rarely reads the research information placed on his desk. Both the Texas and Virginia information dissemination efforts reached and interested many field counselors. They are both excellent systems, the best developed in the national demonstration project, and comparison of their relative impacts is not possible with the data collected to date.

The New Jersey, Massachusetts, and Alabama RUSs organized significant information dissemination activities with some statewide effects. Both Marinelli and Tully worked with librarians who had primary responsibility to the agency or department rather than to the RUS program; Jacobs had no librarian to assist him. Tully and Marinelli succeeded in incorporating the SRS/RIS into the agency library; in addition, Marinelli established and field-tested several local office library systems. Both disseminated research and other information

widely within their own agencies and surrounding social agencies and research centers. Marinelli probably did more experimenting with modes of information dissemination than any other RUS excepting the Virginia RUS Librarian. He cancelled a Departmental Library Acquisitions List when six months of publication generated few requests. In lieu of the Acquisitions List, he instituted a newsletter which was evaluated a number of ways. The newsletter underwent several changes and "with each, increased its users." The major Alabama effort, which was also the primary focus of the Alabama RUS project, was to place sets of SRS/RIS abstracts and indexes in each local office and in the Region's research centers and university counselor training programs. This goal was reached, but Jacobs still expresses disappointment at the infrequent use of the SRS/RIS by state office staff and area supervisors. He attributes this in part to the state agency's lack of microfiche capability until the closing months of the project. Jacobs believes, however, that much of the information has been read, and "needless to say has found its way into practice."

The remaining project states, Utah, Missouri, California, and Wisconsin, did not have significant information storage, retrieval, and dissemination activities. Utah and Missouri did little toward a project information system primarily because the RUSs found the information in the SRS/RIS of little help in day-to-day agency activities. Gant reports that the abstracts "were only moderately useful . . . due to their lack of relevance to rehabilitation practice and to obsolescence of the material." He often turned to journals and research center publications which "had general relevance to actual problems encountered in practice and are considerably less academic in their language and structure." Although Gant published a project newsletter, he rarely disseminated research information to the field. He did, however, deposit SRS/RIS materials in the central office library and established several libraries in local offices. Buchanan found that "much of the information available [in the SRS/RIS] had little or no direct value to Vocational Rehabilitation Programs," and he estimates that he used approximately 10 percent of available final reports and abstracts during the last three years of project operation. Buchanan made few attempts at information dissemination and did not have a project newsletter.

Schlamp of California found that the "information, dissemination, and retrieval function of the RUS was never integrated into the total network of his activities"; the same was true of the Wisconsin project. In both states the RUSs published some information summaries and annotated bibliographies, but organized information dissemination was minimal. In California the library was disbanded during the third

project year; in Wisconsin, although the RUS increased library holdings threefold, central office staff were still unable to use the library five years into the project because documents were not easily accessible. Schlamp believes that the California library was allowed to lapse partly because the incumbent RUS received little training and no guidance from SRS on the use and maintenance of the SRS/RIS. (The first RUS was unable to attend the New York training sessions because of agency restrictions on out-of-state travel). The *Action Abstracts* published by the first California RUS were discontinued after 18 months, and a newsletter was never initiated. Although no impact evaluations were conducted for the *Action Abstracts*, Schlamp believes they had "little practical usage" in the field. The Wisconsin RUS reports no measurable impact for information dissemination activities, except for 105 information requests generated by his three newsletters.

In two instances Sather developed plans for broader dissemination of abstracts and research results, but in both cases the plans were not endorsed. He reached the following conclusion:

> It is extremely . . . difficult to demonstrate that pertinent research findings can be disseminated and start a chain reaction leading to demonstrated improvement in service to clients. A better strategy is to identify a common area of interest, and a need for specific research findings and reports that the user is convinced in advance are of potential value in planning for a program of particular interest to him. The precise informational needs should be defined in advance.

With several notable exceptions, RUS information storage, retrieval, and dissemination activities were not as strong as might be expected given the initial SRS emphasis on the information dissemination role. Although frequency counts of information requests definitely indicated an increase in awareness and interest among agency staff, there were few real measures of the degree of adoption into practice. In addition, some evidence exists that RUS dissemination activities, outside of Texas and Virginia, did not substantially change agency staff habits for using research information. Tully, for example, notes that "the state office reads, [and] uses . . . the R & D BRIEFs, abstracts, microfiche, and final reports when urgent problems arise but only occasionally as a routine matter." In general, the projects which had the greatest yield from their information dissemination activities distributed a large amount of unsolicited information packaged in attractive, convenient-to-use form. They also had organized libraries and willing librarians assisting in the organization, retrieval, and dissemination efforts.

## SPECIAL PROJECTS

Jacobs' (Alabama) Homemaker Rehabilitation Project had an impact "not only with VR clients in this State but with a large number of people who are not on the Rehabilitation staff." The project newsletter increased from an initial printing of 4,000 to over 10,000 as a result of requests. State facilities have structured training programs on the project model, and Jacobs believes that state agency staff have accepted the idea that a rehabilitation as a homemaker is an important closure. The entire homemaker program is now an ongoing part of the VR program in Alabama and is closely tied to the state's home teacher program and home program for the blind. Numerous inquiries have been received from other states and from several foreign countries.

Gant of Utah believes that "it would be impossible to assess" the impact of his activities, since responses to requests have been oriented to specific problems. He notes, however, that it is "likely that RUS materials, [and] placement and job seeking skills training have contributed to the increase in successful placements of Utah agency clients." The Employment Agency Seminars, held near the end of the demonstration period, created "more favorable comment, greater staff participation, and greater verbal support of the RUS project" than had occurred previously. Although the series of seminars was planned by the RUS and state administrative staff, significant input concerning program content, scheduling, and reporting came from each district office. Gant believes that it may have been helpful early in the project had the RUS had "greater access to field workers and had RU related projects been coordinated at each district level."

According to Schlamp the California RUS program was involved in many "invisible" projects, with little widespread impact because of limited dissemination. For example, four of the projects conducted in the Sacramento Model District Office had "limited but definite impact upon some personnel." However, only one was written up, and "the results of all of this effort have not spread beyond what might have been expected." Schlamp believes inadequate follow-up, counselor turnover, and lack of motivation also hindered the impact of some California subprojects. The Iowa "Studies in Continuing Education for Rehabilitation Counselors" in-service training package was introduced, but it was used only "on a sporadic and limited basis."

California activities which were successful were often "initiated for staff who would volunteer participation and cooperation in exchange for services or intervention on their behalf." For example, a project

resulting in the use of the State Employment Service for placement services

> was seen as a positive aid to the rehabilitation of clients. The concept fit in very well with field needs and the RUS received a number of offers to assist in the implementation of such plans.

Bassett (Virginia) introduced some of the most successful innovations via the demonstration project. He capitalized on innovations already developed, tested, and packaged by the West Virginia Research and Training Center. The practices introduced—behavior modification in a rehabilitation facility and psychological testing by agency counselors—were new to the agency and had significant impact. In fact, the psychological testing innovation is one of the few RUS-initiated projects with reported cost-benefit measures. Bassett attributes the success of his demonstration projects to their "credibility," which, in turn, was

> due to the fact that [they] related to a need [felt by] operations supervisors. They realized that the studies could help . . . identify problems which, when resolved, would help . . . meet operational goals.

Bassett reports on one proposed project, introduction of the use of the *Minnesota Occupational Reinforcer Patterns*, which was not successful. He believes that the lack of sufficient sample copies for all members of the ad hoc group of practitioners to whom it was presented and his failure to demonstrate the practical utility of this material led to its rejection.

Perhaps the most interesting influence of the Texas RUS Program is that the Texas Commission for the Blind is establishing its own Research Utilization Specialist program; the Director of Staff Development has been designated as the RUS for that agency. Scott reports that several facility programs are still providing the improved services urged by an RUS project and that on-site surveys show many continue to improve their programs. Some aspects of the "Faster Services to Clients" project are being considered for adoption in other offices. Although no measures are available from the first year of that project's operation, he believes that the project holds promise for saving counselor time. Since the project provides diagnostic services, the counselor does not have to "arrange for these services, pay for them, or wait for overdue diagnostic reports to be forwarded by busy physicians." He also reports that many of the devices produced early in the project using NASA technology are still in use, although he adds, "We have no data to

support our claim." As noted earlier, most of Scott's activities were large-scale information packaging and dissemination projects; their impact and outcomes have already been reported.

Tully's Counselor Performance and Job Placement innovations led not only to greater acceptance of the RUS within the agency, but also to the selection of the Massachusetts VR agency (by the Rehabilitation Services Administration Central Office) as one of two state agencies to continue testing innovative placement efforts. In addition, his use of management by objectives and management by participation to plan and conduct the Job Placement Project had a significant effect on agency policy:

> The collaboration . . . among the participants who planned [the project], . . . the selection of objectives among alternative aspects of placement that could be tested in the project, the documentation of progress, . . . and the evaluation of individual and project activities—all negotiated with supervisors and with the RUS—in part led to the decision to institute management by objectives throughout the agency in 1974.

Tully reports that significant cost savings resulted from his search for information on techniques to serve the severely handicapped in a sheltered workshop setting. The Massachusetts agency was trying to implement such a program but was constrained by lack of funds. Tully discovered that federal matching funds were available for such efforts and the Massachusetts agency was able to undertake the program. Tully notes: "The program coordinator estimates the information I uncovered may increase his program fourfold."

In New Jersey Marinelli succeeded in introducing the use of paraprofessional counselor aides where earlier attempts had failed. From 26 positions in the original RUS demonstration project, the agency now employs 59 aides:

> This achievement stands out when viewed from the climate that existed in the Agency when the program was in its infancy. Counselors and supervisors from a number of offices were overtly and covertly opposed to the program, fearing in some instances that the Agency had introduced this level of staffing to replace higher salaried rehabilitation counselors. Training dealt with these fears and changed the attitudes of many. There were still some traces of resistance, but it was diminishing as field staff came in contact with paraprofessionals and realized that they were not a threat to their status.

Marinelli believes that his Follow-up of Rehabilitation Closures was a major project accomplishment:

> Getting key State Agency staff to undertake the introspection that a follow-up

> study [demands] . . . was a significant departure from the kind of self-evaluation done in the past. At all levels of staff, the RUS was confronted with suspicion and resistance. A series of meetings were conducted involving State and District supervisors to deal with the doubt and fears. Many of them contributed valuable suggestions on the focus of the study and the procedures and instruments involved. The study progressed on schedule, and . . . results . . . were . . . shared. . . . Tentative plans beyond the project period are to use the findings in making appropriate program change.

Marinelli also worked toward agency-wide adoption of a management by objectives system, termed the Operational Planning System. The system proposed by the RUS has been accepted by the State Director and the two top levels of management under him. At the conclusion of the demonstration period, the system was being initiated.

The Missouri RUS notes that, although evaluation activities planned for the fifth project year could not be conducted because of early cancellation of the project, results were nonetheless discernible. Many of the fourteen changes made to the agency's new Manual of Procedures were initially suggested by staff below the administrative level. Buchanan continues to receive suggestions for change from all staff levels, indicating that field staff in particular are aware of their new ability to suggest needed change. He reports considerable interest in the RULE project. By June 1973 the four general agencies and four agencies for the blind in Region VII had used "a total of 45 slots for RULE site visitation." He also presents evidence of impact for his major training activities. For example, available information suggests that his interagency Public Assistance/Vocational Rehabilitation Project substantially increased PA rehabilitations, from 1,158 in FY 1972 to 1,653 in FY 1973. In addition, the Public Relations training sequence was described by agency staff as "outstanding," "the best training the agency ever had," and "relevant to counselor and supervisory needs." Counselors participating in the Public Relations project were given the assignment of developing a project in their local offices, using techniques demonstrated in training. As a result

> one counselor who worked primarily with the alcoholic treatment center in a state hospital developed a project working very closely with the Alcoholics Anonymous chapters in his district. Within approximately four months he was able, through some effective public relations activities, to develop three areas where responsible members of an Alcoholics Anonymous group would provide careful and thorough followup for many of his clients. Since these AA groups were located at some distance from the counselor's [office], these supportive efforts of AA gave additional insurance that the vocational rehabilitation plan would be successful.

Sather reports that several of his projects had a direct effect on client services. The Youth Service Bureau Project resulted in the delivery of services not previously available. In addition, youth in trouble were provided an alternative to a court appearance and adjudication as a delinquent. He has received requests from other states for more information on the DePaul Industrial Alcoholism Project, and two RUSs have made tentative plans to visit the project site to consider introducing the innovation in their home states. In the Fall and Spring of 1970, Sather conducted RUS Institutes which were aimed at developing the capacity for research utilization in field counselors. Of 168 persons who attended RUS Institutes, 149 felt that the "institutes were informative," and 98 agreed that the "institutes would be helpful to them in their jobs." Of 120 counselors who had the opportunity, 106 stated that they would "like to participate in small group discussions and planning for program development and program innovation on a regular basis in their respective district offices." Despite this, the final outcome was not encouraging. When the counselors attempted to introduce innovation in this manner, "they were usually ignored due to lack of interest on the part of the district office supervisor." Sather concludes that such institutes can be useful in promoting program development and change only when endorsed by staff at all levels.

## ASSESSMENT BY AGENCY STAFF

By the end of the project, most RUSs reported a fair amount of support from top management and instances of approval from state office, first line supervisory, and field counseling staff. The Utah state director was "highly supportive," especially of activities focused on job placement, which was an agency priority. Gant adds that although EGA findings suggest some state program coordinators did not fully accept the RUS program, "without the assistance of program coordinators and program specialists, the RUS project would not have achieved such success as it has." Although he agrees with EGA's assessment that district supervisors and counselors were generally less than enthusiastic, did not fully understand the purpose of the project, and occasionally stood in opposition to RU activities when they felt the agency had more urgent priorities, he concludes: "There has been within the Utah agency a general atmosphere conducive to workshop related activities by the RUS. The RUS has enjoyed administrative support and participation where relevant."

Marinelli reports what was true for all RUSs, that influence was greatest with staff most easily accessible to the RUS:

The RUS's influences on the staff were greater with central and regional staff with whom more of an opportunity for contact existed. Their geographic and program proximity facilitated communication. This observation was supported by the [EGA] . . . evaluation . . . which stated that although the RUS enjoyed a position in the Agency's inner circle, the . . . RUS was less well known out in the field than most of the RUS projects. However, among those in the field with whom he came in contact, they were 'by and large impressed and pleased' with the RUS's performance. Therefore, [the extent to which] the RUS [becomes well known and perceived as useful] is partly influenced by geography and his location in the organizational structure. . . . This suggests that the RUS guard against interacting with only those in the Agency with whom it would be convenient.

Sather initially faced an unreceptive Wisconsin agency climate:

During the first two years of RU project activity, there were very few indications that the RU project was being well received. However, during the [succeeding] years, there were more and more indications that the project activities were being favorably received.

He comments on EGA reports of difficulties involving relationships with both central office and field staff:

The [EGA] report indicated that a number of DVR staff who were contacted during field visits, as well as those who completed questionnaires, expressed unfavorable reactions. The RUS was not able to use this type of feedback constructively, since the respondents withheld their names and did not cite specific situations and circumstances that caused the unfavorable reactions. On the other hand, there were respondents who made favorable comments on RU project activities.

He adds that some supervisory and counseling staff have expressed appreciation for technical assistance and other RUS-initiated activities.

Scott reports little organizational resistance to the RUS project once it became a staff function in the Texas agency. EGA interviews with his immediate supervisor, who was an Assistant Deputy Commissioner, indicate enthusiasm and support; further, "it is apparent that he [the supervisor] sincerely believes in the worthwhileness of what the RUS project is doing." EGA found that over half of the Texas field staff had at least a fair amount of contact with the RUS program. One counselor in particular wholeheartedly embraced the idea of research utilization:

[This counselor] makes frequent requests to RU and uses research that is valid and relevant. RU routinely sends him literature and other writings. He uses the material in preparing reports (program evaluation), basing corrective suggestions on what works in other parts of the country. . . . He also learns what does not work and applies this knowledge to Texas if [the agency] is making the same mistake or before [such a mistake occurs]. [This counselor]

views himself as a change agent and is a very positive supporter of the RUS project [Scott, Texas].

In Massachusetts Tully conducted at least five surveys to determine staff reaction to his information dissemination and special project activities. Acceptance increased over time:

> Colleagues have been guardedly receptive to using the RUS in planning for new programs or amending others. In the first year of the program the first RUS . . . experienced the same behavior. Gradually, however, the situation has changed and there is an increasing willingness for colleagues to use the RUS along with the traditional modes of obtaining staff specialist assistance. At present, a considerable effort is being made to integrate the RUS into the operations of the agency as a useful and significant team member.

Tully has received personal acknowledgements from staff at all levels and notices "a heightened awareness and curiosity on the part of agency practitioners and administrators regarding the progress in the rehabilitation field as a whole." He recounts a specific instance in which his activity created an unreceptive attitude among agency staff:

> I feel that the first presentation I made to the administrative and senior district office staff at the request of my agency created an unfavorable impression. I had just attended the RU conference at the Institute for the Crippled and Disabled in New York (March 1971) at which . . . Federal Officials had presented projected plans and trends for the 1970's. Upon my return I was asked to relate these projections to the agency. The anticipated sweeping changes, reorganization of the social service administration, and the prospect that 'the next five years may bring more changes to the VR system than the previous fifty,' was distressing to some key administrators. If I had it to do over again I would avoid being identified with threatening change and seek the image of retriever and adapter of useful knowledge.

Jacobs cites increasing requests for information and staff willingness to forward interesting materials to the RUS as evidence of acceptance by the Alabama agency. He has received many good reactions to the RUS project and believes that staff began to see real results from RU activities only in the last year of the project. Although EGA findings suggest that "too many people in the state" know very little about the program, Jacobs' personal surveys "have indicated a broader knowledge . . . and . . . acceptance." He finds much higher acceptance among younger supervisors and master's level counselors than among older, more tradition-oriented field staff.

California agency staff may have "seen [the RUS] as serving top administration." Schlamp reports that at times counselors did not view the RUS as a resource, but rather as "a necessary and beneficial inter-

mediary who might test, modify, or make practical the implementation of procedures established by administrative decisions." Nonetheless, staff generally viewed the RUS in a positive light, especially in terms of being knowledgeable.

## SUMMARY RESULTS – EGA EVALUATION

EGA evaluators defined three levels of outcome for the RUS projects: immediate (changes in the attitudes, knowledge, and behavior of rehabilitation workers), intermediate (changes in services to clients), and ultimate (changes in clients' lives). Immediate outcomes were measured by an Impact Inventory questionnaire, intermediate outcomes by findings from consultants' field visits. Possible ultimate outcomes—changes in the lives of rehabilitation agency clients—were not measured. Below is a short summary of EGA findings; the interested reader is referred to the several evaluation reports (Glaser & Backer, 1973a; 1973b; 1973c; 1974a; 1974b; 1974c) for a complete description of methodology and findings, and the texts of the field interviews. In addition, a short section from EGA's Executive Summary to their Final Report is attached to this joint final report as Appendix C.

Overall summary evaluation rankings from the EGA study are presented in Table 3 below. The rankings for contact with the field were based on questionnaire data showing the frequency with which respondents had interacted with the RUS. Findings from the Impact Inventory survey provided the field evaluation rankings. Expert judges' rankings are the overall ranking of global ratings assigned by three judges who reviewed the field reports prepared by consultants and assessed each RUS program on eight specific characteristics.

The number of agency staff reporting direct contact with RUS projects ranged from 29 percent in Missouri to 67 percent in Utah, with an average of 51 percent. Between 31 and 58 percent of all staff surveyed said they had no direct experience with the RUS project. The theoretical maximum score on the Impact Inventory, which measured "the extent to which respondents report seeing the project as valuable and relevant to their work," was 336. Actual ratings ranged from 166 for Wisconsin to 231 for Virginia, with six of the nine projects rated similarly (scores of 209 to 231). EGA evaluators conclude that on the basis of the questionnaire and rating indices, "Virginia and Texas are the most successful RUS projects, a finding that is most congruent with the other evaluative evidence EGA gathered."

EGA derived several indicators of success for the RUS projects—sur-

TABLE 3[1]

RUS PROJECT RANKINGS–CONTACT WITH FIELD, EVALUATION FROM FIELD, EXPERT JUDGES, TOTAL, AND RANK: EGA EVALUATION PROJECT

| STATE | CONTACT WITH FIELD | EVALUATION FROM FIELD | EXPERT JUDGES | TOTAL | ORDER |
|---|---|---|---|---|---|
| Massachusetts | 5 | 5 | 6 | 16 | 4 |
| New Jersey | 7 | 4 | 1 | 12 | 2* tie |
| Virginia | 4 | 1 | 2 | 7 | 1* |
| Alabama | 3 | 3 | 6 | 12 | 2* |
| Wisconsin | 6 | 9 | 4 | 19 | 5 |
| Texas | 2 | 2 | 3 | 7 | 1* |
| Missouri | 9 | 6 | 7 | 22 | 7 |
| Utah | 1 | 8 | 6 | 15 | 3 |
| California | 8 | 7 | 5 | 20 | 6 |

[1]Source: Glaser & Backer, 1974a, page 105.

vival (i.e., continuation of the project through the five-year period); an increase in staff awareness and interest in new information; the establishment of information systems; the initiation, conduct, and stabilization of innovations through blue ribbon projects; and high-level consultation activities. Shortcomings EGA noted included diversion from legitimate RU activities, limited evaluation, limited field contact, little or no national coordination, and negative reactions to the personalities of individual RUSs. Other factors which seemed to detract from the projects' success were lack of support from top agency management, resistance among agency staff, and the initial deliberate lack of structure. Evaluation findings further indicate that the RUSs were most successful in direct innovation and as consultants or facilitators of innovation, and least successful in developing a need sensing role and creating an agency climate conducive to change. EGA summarized the overall impact in terms of change:

> We have now presented a considerable amount of evidence to support the notion that change in rehabilitation agency settings truly is difficult to effect; in fact, the nine-project national RUS demonstration program seemingly has produced only a modest (though sometimes significant) amount of such change.

## IN CONCLUSION

Despite many barriers, eight of the nine RUS projects survived the five-year demonstration; further, all report at least some positive results from RUS-initiated activities and an increase in acceptance among agency staff. The RUS program will be continuing in six states—Alabama, California, Massachusetts, New Jersey, Texas, and Virginia.

Seven of the nine RUSs incumbent at the close of the project were convinced of the value of an RUS model similar to the model demonstrated. The dissenters were Gant of Utah and Sather of Wisconsin. Gant offers the following summary:

> In terms of impact it has been adequately demonstrated that change occurs when new ideas can be incorporated into the value system of an individual .... It appears that traditions occur around the courses of action tied to the value system of individuals within an agency. These traditions are not easily abandoned and occasionally the RUS was seen as a usurper. The RUS system could have greater value, but only in an agency where there is common understanding of the role that he is to play and common agreement that he has an important function to perform. When this . . . occurred within the experimental RUS system, outcomes [were] favorable.... After thinking the matter through and discussing it at length, I do not recommend the RUS concept in a State agency.

In Wisconsin, the research utilization specialist responsibilities have been incorporated into the job description for Client Services Specialist. Among the major duties of this position are the following:

> Develops knowledge and expertise on the state-of-the-art in service delivery, legislation, community resources, and other pertinent areas.
>
> Helps develop and maintain a clearinghouse on information of potential value to researchers, administrators, practitioners, and DVR supervisors and counselors in particular.
>
> In his specialized program area, disseminates information as needed or requested to those who can utilize the information in enhancing program effectiveness.
>
> Works with the Staff Development Section in identifying and developing training plans to meet in-service training needs of staff, especially as related to his area of specialization.
>
> Works with field office staff on the development and testing of program innovations designed to solve problems and enhance program effectiveness.

The remaining seven RUSs believe that the concept of the RUS has merit in a state rehabilitation agency:

> The research utilization function in a state Vocational Rehabilitation Agency has potential for improving Vocational Rehabilitation programs. Whether this improvement is promoted through regular and recognizable staff functions already present in the organization or as a new role and function is not really an issue. The significance of appropriate and meaningful knowledge utilization processes can be demonstrated; given the proper emphasis and administrative support of the role and function of the research utilization specialist, the job title per se may not be too important [Buchanan, Missouri].

All have demonstrated their commitment to the RUS concept through their continuing efforts to pursue project goals. Jacobs of Alabama sums it up:

> Statements that would indicate the merit of a Research Utilization Program in a state VR system would perhaps best be broadly stated. We are all conscious of the fact that a tremendous amount of research has been done and, without some organized effort, the findings and recommendations of the research will not reach the state agency program for application. The interest that has been manifested by our staff, and the results we have seen with . . . one major project and some two or three minor projects, is indicative of what can be done when emphasis is given to the utilization of research information. . . . The need for a research utilization program in the state is as essential as the research and program development activities.

# POSTSCRIPT

George A. Engstrom
Chief, Research Utilization Section
Social and Rehabilitation Service

As SRS Central Office manager for the Research Utilization Specialist projects, I would like first to express my thanks and appreciation to the 17 men and women who assumed the role throughout the five-year project period. From the federal perspective, the demonstration was a success. On the broadest scale, the RUSs took a somewhat ill-defined role and developed from it a workable model for the job of a Research Utilization Specialist on the staff of a state vocational rehabilitation agency. In terms of research utilization theory their experiences have provided new insights into the concepts of linkage and needs assessment—insights which provide the information necessary to transform these concepts into operational activities. On another level, much good research information was put into practice, and the staffs of nine state agencies, at least, were sensitized to research as a viable source of input for improving services to disabled clients. The RUS projects had a definite impact at the federal level, particularly on the design of the SRS Research Information System and planning and programming for the nationwide PA/VR Expansion Grant program. In addition, the RUSs provided invaluable consultation on audiovisual materials prepared by the SRS Division of Research Utilization, and authoritative reviews of many RU project proposals.

I am sure there were times when the RUSs were convinced that, if they were succeeding at all, it was in spite of the federal office. We were remiss on at least two counts. First, internal pressures and funding constraints got in the way of project site visits. Second, and perhaps most important, we carried the "laissez faire" approach to project structure far beyond the point where it could produce the desired effect. By year three, we probably should have mandated some structure to assist the RUSs to develop an institutional role and concurrently lessen the severe resistance met by some of them.

Nonetheless, I am firmly convinced of the efficacy of the Research Utilization Specialist concept. Project results clearly indicate that research utilization is a system, it cannot reside in only one individual within a social service agency. However, many state social service agencies, particularly those with more complex structures, could benefit from an internal change agent. To be effective this agent should not be tied to one specific purpose or one area of program responsibility. In addition, the successful change agent will share the tasks which make up a research utilization system—using the services of a librarian for information storage and retrieval, turning the conduct and evaluation of demonstration projects over to those responsible for ultimate adoption, and returning administrative control of a newly-introduced and stabilized program to the appropriate agency staff member.

The experiences of the RUS program indicate that many rehabilitation workers feel a need for growth and self-renewal in their work. Findings also suggest that all levels of staff and management in vocational rehabilitation have difficulty marshalling research and other knowledge which would decrease the cost of developing new or improved methods of operation. With the increasing demand that the vocational rehabilitation program serve more vocationally handicapped—and more severely handicapped—individuals, and be more accountable for its effectiveness in providing needed services, the need for exploiting what others have learned through systematic investigation and experience will become greater. In such a future, people with the goals and skills shown by the RUSs can play a vital role; it is clear that many of the roles and functions undertaken by the RUSs in the national demonstration should be incorporated into the job description of the staff person assigned responsibility for effective knowledge utilization.

Finally, we began the project fully aware that we were potentially bringing into being a new kind of rehabilitation professional. Those who, in accepting the RUS positions, allowed themselves to be shaped into a new professional role, and the agencies which reshaped themselves to accommodate that role, produced a field for learning not only about the personal and organizational impact of the RUS as a new rehabilitation professional, but about the impact on the incumbent of any new profession and the organization which accommodates him. Perhaps this knowledge spin-off will become yet another contribution of the RUS demonstration.

# APPENDIX A

**1968**
**Guidelines For**
**Research Utilization Specialists In**
**State Vocational Rehabilitation Agencies**

*Introductory Note*

These Guidelines are based on research utilization experience in fields other than rehabilitation, one of the early models being that of the County Agricultural Agent. Implementation, which will be strictly voluntary, is expected to begin on a pilot basis with one State in each Region participating and the possibility of more general use later if preliminary results are encouraging. Funding will be on a demonstration grant basis.

*Purpose*

The State Research Utilization Specialist will have the general function of promoting the actual use by practitioners of new research findings, so that more and better-quality rehabilitations can be achieved. He will bring new and more effective findings to the attention of practitioners and administrators; call the most urgent needs of practitioners to the attention of administrators and researchers; and in particular employ a variety of strategies, in collaboration with others in his State and Regional Office, to promote the use of these effective research results by practitioners, and their adoption by ongoing programs.

*Position in the State Agency*

The Research Utilization Specialist will function at a Statewide Supervisor level in the State agency, and will collaborate in appropriate ways with other State office staff responsible for specific rehabilitation functions such as Facilities, Case Services, and Staff Development, in promoting new practices based on research findings.

*Relation to Regional Office*

Working through the State Director, the Research Utilization Specialist

maintains liaison with a designated member of the Associate Regional Commissioner's staff (and thus indirectly with the Regional Commissioner, SRS), receiving information on new practices being used in the Region which may apply to his State and on any unmet needs in his State as seen by the Regional Office. In turn, he alerts the Regional staff person to the major needs in his State calling for new approaches and suggests research findings likely to meet these needs. In general, he integrates his efforts on behalf of new practices with those of the Regional Office, obtaining its concurrence in his plans, thus maintaining an atmosphere in which new approaches can survive and prosper. To facilitate this, the Associate Regional Commissioner, in consultation with the Regional Commissioner, SRS, should designate a staff person to work with the State Research Utilization Specialist.

It is anticipated that some of the innovations introduced by the Research Utilization Specialist will be developed through Expansion or Innovation Grants, which are approved at the Regional level. This illustrates again the need for the Research Utilization Specialist to develop close working relationships with the Regional Office and to become familiar with all relevant programs such as Expansion and Innovation Grants.

*Relation to Central Office, SRS*

The Research Utilization Specialist's primary point of contact with Central Office, SRS, will be the Research Utilization Branch, Division of Research and Demonstration Grants. His functions will also relate significantly to those of the Rehabilitation Services Administration.

*Specific Functions*

Works on a Statewide level to promote the use of new and more effective research results by practitioners, primarily rehabilitation counselors. In doing this, collaborates with other State Supervisors in charge of various rehabilitation functions, such as Case Services, Facilities, Staff Development, Operations Research, etc. It is important, for example, that he work closely with the Facilities Specialist, for many of the new research results can be put to use in facilities and workshops. The same is true of Staff Development, since it is anticipated that most of the effective research results will be usable by practitioners.

His primary source of usable research results will be the collection of about 1,000 final reports thus far produced by the research program of the Division of Research and Demonstration Grants. However, he need not limit himself to this collection of final reports, but may also draw

usable results from research in other areas such as psychology, counseling, sociology, and Departments of Physical Medicine and Rehabilitation. The main consideration will be that research results, wherever found, have potential for solving significant rehabilitation problems. It is expected that he will exercise initiative in this and other respects, evaluating and interpreting research findings, formulating rationales for their possible use, and devising ways of putting them into practice in rehabilitation settings.

His general approach, in consultation with State Director and designated person in Regional Office, will be to work through District Supervisors to bring usable research results to the practitioners. While he will not work individually with counselors or other practitioners, he will maintain sufficient informal contact with them to get an accurate picture of their needs and preferences, and will work with them formally in groups. For example, he may plan and carry out short-term institutes for practitioners and administrators, dealing with the application of new research findings.

He will also engage in other appropriate activities designed to contribute to the general purposes stated above.

In his work, the Research Utilization Specialist will use strategies apt to facilitate the adoption of those results he presents for use. He must therefore have a working knowledge of the forces and circumstances which facilitate innovation and those that impede it (including, e.g., the characteristics of innovations themselves), and use such knowledge to achieve a greater innovative effect with a given effort simply by reducing opposition to change and promoting new findings that are most apt to be accepted. In part, he will also sensitize practitioners to those forces within themselves and their circumstances which hinder change, so that awareness may help to counteract them.

To assure such working knowledge, short-term training—including Central Office orientation, special training in the principles underlying the adoption of new practices, and workshop experience in using this knowledge—will be offered to Research Utilization Specialists and to the Regional Office person designated to work with them.

*Qualifications of the Research Utilization Specialist*

He should have a genuine interest in rehabilitation and its improvement; in new and effective research results which may help to accomplish this; and in the principles involved in the diffusion and adoption of innovations.

His experience should be mainly that of a practitioner, but one able to see the good in research results and willing to modify his practice accordingly. This is more important than technical competence in research itself, although a "feel" for the latter is desirable. His primary role will be to facilitate change by encouraging new practices based on effective research results.

In personality, he should be the "promotional" type—venturesome and eager to try new ideas, with evidence of this in his work history. He should be naturally skilled at interpersonal relations, effective in dealing with groups and individuals, and able to win them over to his innovative enterprises. It may enhance his effectiveness if he is known and respected in rehabilitation circles within his State.

More specifically, it is desirable that he have (1) a Masters Degree in rehabilitation counseling or similar area relevant to rehabilitation; and (2) at least two years of experience in a State agency or other rehabilitation facility, preferably as a counselor or other practitioner, where he has encountered a variety of clients and problems. If he does not fully meet these requirements, his education, experience, and overall history should give tangible evidence of an active interest in the kinds of problems and activities outlined above, and of capacity to pursue and solve them creatively.

*Salary and Budget*

The budget will provide, on a 90-10 matching basis, salary for a Research Utilization Specialist and a secretary, and additional funds for office expenses, necessary travel, consultants, short-term institutes, and research utilization conferences.

Since the Research Utilization Specialist will function at a "Statewide Supervisor" level, and the position will be comparable in level and responsibility to that, e.g., of "State Supervisor for Casework Services," salary will be at a corresponding level and will be integral with the State salary structure. Salary for secretary will be similarly determined.

Each demonstration project will run for five years, and semiannual progress reports will be required.

*Preparing an Application*

In preparing an application for a demonstration grant for Research Utilization Specialist, those involved should bring the District Supervisors in the State into the planning at the outset, using them and others who may later be affected as an advisory group. In this way, agreement

can be reached in advance on the broad outlines of the application, main problems needing attention, and perhaps their priority. This will facilitate cooperation later. Similarly, the appropriate person in the Regional Office should also participate in this advance planning.

Those preparing or reviewing an application should also satisfy themselves that the person who is to function as a Research Utilization Specialist has the broad qualifications outlined above.

Prepared by:

Research Utilization Branch
Division of Research and Demonstration Grants
Social and Rehabilitation Service

# APPENDIX B

**1970**
**Guidelines for**
**Research Utilization Specialists in**
**State Vocational Rehabilitation Agencies**

*Introductory Note*

These Guidelines are based on research utilization experience in non-rehabilitation fields, an early model being the County Agricultural Agent. However, the use of findings from the medical, social, and behavioral sciences to improve service programs is far more complex than the adoption of a new variety of rice in agriculture, and all proposals received should demonstrate insight into the complexities involved, and some grasp of how they can be surmounted. Nine of these demonstrations are already underway. Our intention is to add others as resources become available and promising proposals are received. Funding will be on a demonstration grant basis.

*Purpose*

The purpose of the RUS demonstrations is to build a new role within State agencies, the primary focus of which will be to improve agencies and service programs by promoting the use of the best knowledge available. Important functions will be to ascertain urgent needs within the State and Region, bring these needs to the attention of administrators, practitioners, and researchers, and suggest strategies for meeting them. Emphasis will be on creating a general atmosphere conducive to change, a willingness to use available resources and knowledge, and a capacity for ongoing renewal within agency and program. Processes and strategies leading to constructive change will also be stressed, not for the sake of change itself, but rather as a final goal to help individual clients assimilate new insights into their own lives so they can function better and come closer to self-realization.

Openness, self-examination, and willingness to consult and use new ideas will be the qualities sought. A spirit that is not quite sure it's right (the spirit of liberty), coupled with receptivity to the expertise of the innovator, are also essential for success.

*Position in the State Agency*

If the RUS is to succeed, the State DVR Director must fully support the research utilization program and foster a climate conducive to change. All proposals should reflect this. Mutual support, respect, and trust between the State Director and RUS are essential. The RUS should be able to gain this support through his own expertise, and should work to become so knowledgeable about needs, resources, and strategies for improving services and payoff that the State Director will want to consult him and use what he has to offer.

The RUS will function at a Statewide Supervisor level and should have a degree of line authority if he is to be effective. Accordingly, the Director and other supervisory staff must keep the RUS fully informed of program goals, plans for expansion and innovation, research, and other significant changes in the agency's procedures or priorities; and they should also involve him in these efforts as a strategy and resource person. Some RUS activities, in turn, will relate to those of other State Supervisors (as for example Staff Development), hence must be mutually coordinated.

*Relationship with the Regional Office*

The RUS maintains liaison with a designated member of the Associate Regional Commissioner's staff, receiving information on new practices being used in the Region which may apply to his State and on any unmet needs in his State as seen by the Regional Office. In turn, he alerts the Regional staff person to the major needs in his own State calling for new approaches and suggests research findings likely to meet the needs. He integrates his efforts on behalf of new practices with similar efforts being made by the Regional Office, thus maintaining an atmosphere in which new approaches can survive and prosper. To facilitate this, a specific staff person in the Regional Office must be designated to work with him.

It is anticipated that some of the Expansion Grants developed by the State for final approval by the Regional Office will involve activities having a strong RU flavor. The RUS should be brought actively into the planning of these by the State Director. The Regional Office role in their final approval illustrates again the need for the RUS to have an active relationship with that Office.

*Relationship with SRS Central Office*

The RUS's specific point of contact with SRS Central Office will be with the Chief, Research Utilization Branch, Division of Research and

Demonstrations. His functions will also relate significantly to those of RSA, whose program specialists will offer their expertise as needed by RUS projects. This input will be channeled through an RSA research liaison person. Another RSA staff member will coordinate training support for the RUS.

*Specific Functions of the RUS*

The RUS will offer expertise on using knowledge and change processes to improve service programs. He will be a *catalyst* who gets things started. He will uncover problems and needs, and *offer solutions* for them. And he will *activate and guide the processes* leading to problem solving and the adoption of innovations.

In doing this, he will draw on usable knowledge or research findings that have potential for solving urgent agency or rehabilitation problems. The relevance and validity of the knowledge, not its source, will be the decisive consideration. Thus, he will use not only SRS R&D findings but also those from other sources such as psychology, counseling, sociology, and management. Use of such knowledge to improve service programs will require not only accurate diagnosis of a given problem but also valid knowledge that can solve it, skill at gaining acceptance of the new practice, and ability to stabilize it once adopted.

This means that the RUS will be responsible for initiating and carrying out specific RU demonstrations (involving, for example, practitioners or facilities) which include an adequate system for reporting data, criteria for evaluating outcomes, and a time frame for completing the demonstration. Some of these may be modest demonstrations by counselors in field offices to test R&D findings or other knowledge, and the ego involvement of staff can give them impetus.

Thus, one task of the RUS will be to work through District Supervisors to bring usable results to counselors. While he will not work intensively with individual counselors, he will maintain enough contact to get an accurate picture of their needs and their potential as innovators, and he *will* work with them in groups, as in short-term institutes on the use of new knowledge. Here, he will also have an opportunity to sensitize them to those forces within themselves that prevent change and cause inefficiency, so that awareness may help to overcome them.

It is also clear from this that the RUS must coordinate some of his work with that of other State Supervisors. For example, he will work closely with the Facilities Specialist when putting new research results to use

in workshops; and the same is true for the area of Staff Development, since much of the knowledge utilization will be done by counselors.

However, the intention is that the RUS project . . . bring into being *a distinctive role having to do with change.* Insofar as change is occurring, there is need to direct it. Where it is not occurring but should be, there is need to stimulate innovation based on sound knowledge. And where current practice is sound and effective, there is need to identify, describe, and spread it, for this too can be innovative.

To do all this, the RUS must have a working knowledge of those forces in individuals and organizations that promote and those that hinder innovation; and he must use such knowledge to gain maximum innovative effect with a given effort, as by reducing opposition to change or promoting good innovations with qualities apt to make them acceptable.

To help assure such working knowledge, training will be offered the RUS as needed to meet their varying needs. Since the intent is to build a research utilization system, training for other strategic staff in State and Regional Offices may be needed, along with periodic meetings of all those involved.

*Qualifications of the Research Utilization Specialist*

He should have a genuine interest in State agency service programs and their improvement; in new, effective research results and knowledge which may help to accomplish this; and in the principles involved in the diffusion and adoption of innovations. And his experience should reflect this.

His experience should include work both as a practitioner and a supervisor, the first to provide insight into client needs, the second to enhance acceptance by peers in his new role. He should also be known and respected throughout his State for those qualities needed to succeed as an RUS.

He should be an opinion leader, a promotional type who is venturesome and eager to try new ideas, with evidence of this in his work history. He should also be naturally skilled at interpersonal relations, effective in dealing with groups and individuals, and able to win them over to his innovative enterprises. Along with this must go a sound grasp of research and the essentials of the scientific method.

It is preferable that he have a Ph.D. in an area related to research utilization, such as psychology, management, or sociology. He must have at

least a Masters Degree in an appropriate area, plus five years of experience in a service agency, two of which must have been as a supervisor. Two years of experience in all, both as a supervisor, will be sufficient if he has the Ph.D.

It should be recognized that the RUS role calls for a *most unusual* combination of traits, education, and experience, and in selecting the person to fill the role, corresponding care should be exercised to ascertain that the candidate embodies them, for inservice training cannot create a good RUS from poor material. Exceptional intelligence is essential, along with a personality that can empathize and deal effectively with anyone from a client to a State Director.

*Salary and Budget*

The budget will provide, on a 90-10 matching basis, salary for a Research Utilization Specialist and a secretary, and additional funds for office expenses, necessary travel, consultants, short-term institutes, research utilization conferences, and other essential items.

Since the RUS will function at a supervisory level, and the position will be comparable in responsibility to other statewide supervisor posts, salary will be at a corresponding level and will be integral with the State salary structure. Salary for secretary will be similarly determined.

Each demonstration project will run for five years, and annual progress reports will be required.

*Preparing an Application*

Proposals for an RUS project will use the regular R&D forms but the narrative outline should be altered to reflect the special RUS role and goals. Important needs and problems of agency and clients that seem amenable to RU-type solutions should be identified. RU demonstrations or other activities planned to deal with these problems should be set forth, covering at least the first two or three years of the project. The design for each demonstration should be given, including system for recording data, criteria for evaluating outcome and judging project success, and time span for completion; or any other complete statement of methodology.

In planning these discrete demonstrations, as well as the total application and project, an important RU principle must be borne in mind, namely, the need to involve *at the outset* those key people who will in

large part determine success or failure. Thus, those applying may wish to bring District Supervisors into the planning, using them and others who may be affected as an advisory group. In this way, agreement can be reached in advance on the broad outlines of the application, main problems needing attention, and perhaps their priority. This will facilitate later cooperation. Similarly, the appropriate person in the Regional Office should also participate in this advance planning.

It is not too early even at this point to be asking also "What kind of Final Report can an RUS project render?", for the answer to this has a real bearing on what is planned and done. We want how-to-do-it Final Reports that will tell *what* works, *how* it works, and *why*. They should also yield information on overall impact of project on agency and clients, as indicated, for example, by more clients being served and served better; increase in number of innovations adopted; growth in professional flexibility of staff; greater use of research results to solve problems and improve practice; and a rising tendency to seek out the services of the RUS.

The last point is the acid test, for a professional role develops and endures when there is demand for it and it can deliver what is needed.

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# APPENDIX C

## What Can Be Learned From This Evaluation?[1]

First, it seems clear that *an RUS can provide a resource of considerable assistance to a state VR agency director.* For example, in the Massachusetts RUS project, RUS Edward Tully was able to bring important research-based information about "management-by-objectives" to the attention of his agency's commissioner. This information subsequently was utilized by the commissioner in developing a new operational strategy for the entire agency.

Second, *an RUS can develop and implement (or facilitate the development and implementation of) innovative service delivery programs based on R&D findings or successful practices from other settings.* It is true that, given adequate time, money and other resources, many professionals can devise and implement service delivery improvements, but the RUS's particular methods do provide several distinctive advantages. R&D project findings are a source for innovations that persons other than an RUS (or someone else who keeps abreast of rehabilitation research) ordinarily might not be aware of or consider. Also, an RUS's orientation to facilitating change through such strategies as personal contact, psychological involvement of agency personnel via workshops and task forces, etc., can provide a substantially greater chance of succeeding in bringing about constructive change.

Third, *the RUS can provide a highly effective knowledge search and retrieval function.* The RUSs were oriented to the resources provided through written materials, but also developed means for obtaining important new knowledge through *personal contact* with operators of programs in other state agency settings. Some efforts involving audiovisual media also were undertaken.

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[1]Source: Glaser, E. M. & Backer, T. B. Executive Summary, *Evaluation of the national research utilization specialist demonstration.* Los Angeles: Edward Glaser & Associates, 1974, pages xi-xii.

Fourth, in several states studied by the evaluators, *the RUS provided a distinct contribution to the state agency through his serving as a focal point for new knowledge, and indeed, for all efforts to promote service delivery improvements.* Through his knowledge search and innovation implementation activities, the RUS in these agencies became a logical choice to serve as coordinator and contact person for change efforts. By developing an [redacted]e within the state agency that marked him as credible and as a [redacted]le resource, the RUS increasingly assumed the role of central mo[redacted] innovation in the VR agency.

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